

Albert Einstein is often quoted as saying, “The important thing is to never stop questioning.” This statement can be seen as the motto of any good scientist. The beauty of science is that every answer found uncovers more questions. The inconvenience of science is that searching for answers to those questions requires more money. In order to get that money, scientists must apply for, and win, grants. A grant proposal is simply a request for funding that tells the funding source what you want to research, what related research has already been done, how you will do your research, and why it matters. If your grant proposal is the most convincing, then you get the money to do your research.

In this unit, you will be writing a grant proposal for work that could be done in the Roberts Lab. This means that it can either be related to DNA in cichlid fish, or be otherwise related to work that has been done in the lab. Regardless of your chosen focus, you should make sure that your research is worthwhile and interesting.

* **Title Page** - includes a brief but specific title for the project, the name(s) of the investigator(s), the amount of money requested, and the grant funding organization you have chosen
* **Summary** - should describe the current knowledge on the topic, the need for further research, your specific research goal, and a brief statement of how you will do your research (100-200 words)
* **Background and literature review** - an overview of what is currently known in relation to your topic, particularly highlighting recent research; this is also the section to highlight what has not yet been learned about your topic (300-600 words)
* **Research Question** - state the question(s) your research will be trying to answer, and give your hypothesis; remember, both should be stated in a way that speaks to measurable results (no more than 75 words)
* **Methodology** - describe what you will do as specifically as possible, and include rationale; in other words, why are these methods the best way to study this question? This section should also include a timeline for the project. (250-500 words)
* **Preparation** - explain why the Roberts Lab is the best place for this work to be done and you are the best investigator to do it (100-150 words)
* **Conclusion** - one final opportunity to state why it is so important that your research gets done (no more than 100 words)
* **References** - give formal citations for any sources you used in writing your proposal; you do not need to cite source for common knowledge

*Example:*

* *Alzheimer’s disease causes progressive memory loss. -* ***Do not cite***
* *A recent study has shown that antibiotics may slow progression of Alzheimer’s by reducing A-beta buildup in the brain -* ***Do cite***
* **Budget** - give an overview of how much you will be spending, broken down into categories, with a brief description of each category. (See example provided for guidelines on how specific to be.)

Your completed proposal will be evaluated by both your teacher and researchers from the Roberts Lab, so make sure that your work is thoughtful, professional, and error-free!