

## Writing an Abstract

An abstract is a short document that summarizes the key points in a research project. This document advertises your project to others and showcases your project. Therefore, your abstract should highlight your project in the best possible light. We will use your abstract in many different forums: on the CREST website, in the model description sheet, in the program booklet for the final presentations and on your poster. Therefore, this one short description will have several opportunities to describe your project. Make it descriptive and engaging.

How do you write a descriptive and engaging abstract?

- Think first about the big picture.
  - Where does your protein fit in the big scheme of life?
  - Why do we care about this molecule?
  - What does the molecule 'do'?
  - Are there diseases or other problems associated with a mutant form of the molecule?
- Then think about the molecule itself:
  - What are the interesting features of this molecule?
  - Does it share the same shape with other molecules or have some unusual features?
  - Does it 'work' with other molecules in an important way?
  - What structures are you emphasizing in the model, and why are these important?
- Think about how this model will help researchers learn more about the molecule

**Your abstract should have the following information:**

**Title.** The title should have the name of the molecule and may have a brief description of the function or significance of the molecule.

**Authors.** The authors are the students who are performing the research and model design. The educator and research mentor will be listed separately. Names may be listed in order of level of contribution with the person doing most of the work on the project listed first, or the names may be listed alphabetically.

**Educator(s).** List the name(s) of educator(s) with whom the team worked.

**Institution.** Name of institution, address, city, state, zip code

**Research Mentor(s).** List the name of your mentor, title, research institution, city, state, zip code

**Abstract.**

- Start your abstract with an introductory sentence that presents a general statement of the 'big picture' story and grabs the attention of your audience. Make the reader want to continue to read about your project.
  - Why should we care about your project? The protein that you are working on is very interesting to you and your mentor, but you need to make the general audience (your colleagues) interested as well. What does this protein have to do with everyday life? Why study it? What impact does this protein have on the global world?
- Introduce the specific molecule and give supporting information on the molecule function in the cell.

- What does this protein do within the cell? What is its job?
- Where can you find the protein within the cell?
- Does it interact with other molecules?
- Describe what happens if the protein is missing or defective (Is it lethal? Does a disease or disorder result?)
- Somewhere in the abstract (at the beginning or the end) there is usually a phrase/sentence talking about the importance of the work, or how this work will affect further research
- Summary or conclusion

#### **Things to avoid while writing your abstract:**

- Avoid technical words that most readers won't understand
  - If you must use the terms, make sure that you explain them.
- Avoid using abbreviations or acronyms that are not commonly understood unless you define them.
- Avoid using phrases that do not contribute to the understanding of your project. For example: "The fact that..."; "In order to..." Don't use more words than you need to make your point.
- Avoid copying sentences directly from primary citations or other resources into your abstract. This is plagiarism. Your abstract is your own work and therefore should be your own words.
  - Read through the articles, but when you are writing the abstract, put the articles aside and write the abstract without these references in front of you. This will allow you to write from memory and allow you to avoid the temptation to use another author's phrasing. You might not be able to fill in all the important details, but don't look at the primary citation until AFTER you have written the abstract. You can then go back and recheck the details. If you can't write the abstract without looking at the article, you need to go back and do some more reading and thinking before you write.
- Abstracts do not include any citations to the literature. These references WILL be listed on the model description sheet and the poster, but just not cited in the abstract.

#### **Keeping to the Word Limit**

Your abstract should be 200-250 words. This can actually be more challenging than writing 1000 words. How do you meet this word limit? When writing your first draft, don't worry about the word count. After completing the abstract, read back through it and cross out phrases and sentences that are not important. Combine sentences to shorten the length of the abstract. It is better to use fewer words to get your point across. But, remember that you still need to get your reader to understand what it is that you are trying to convey.

#### **Revisions**

The more that you read through your abstract, the more concise and tighter it will be. The more people who read through the abstract and offer feedback, the better it will be. As you continue to work on the project, you will develop a deeper understanding of your story, so you will have the opportunity to edit your abstract again. However, it is important to begin formulating the abstract while you are designing the model, as this overview will guide and inform model design.