

Group IV Poster Presentation

Once you have finished collecting and processing data, it will be necessary to present your work in a professional manner.

When research scientists complete a research project, they often report their findings in one of two ways:

1. By writing a paper which is then published in a professional journal such as *Science*, *Nature* or *Journal of the American Chemical Society*.
2. By presenting the results of their work using a poster at a symposium in front of their peers.

You will be doing the second. You and your group will be responsible for producing a **professional-looking** poster which will be presented at a symposium showcasing your work at a date to be determined.


The requirements of the poster are:

1. **It must be computer-generated.** It may NOT be handwritten. Professionalism is extremely important when presenting scientific research and it will be as important with your presentation of this project.
2. **There must be a title.** This title should be descriptive of what your research question was and should be formulated as a question. It should not be cute or clever. For example, if your project was to determine which antifungal agent would prevent athlete's foot better, an appropriate title for such research would be: "What is the Optimum Antifungal Compound to Prevent *Tinea pedis*?" **NOT** "Which chemical will keep you from getting stinky, infected feet?"
3. **You must credit the name of the institution where you did your work.** If you look at the example on the back, notice at the top UTD is mentioned. When you create your poster, "Allen High School" should be in its place.
4. **You must have an introduction.** The introduction gives the readers important background information they may need to know in order to understand your work.
5. **You must discuss the strategy by which you solved your problem.** This is akin to "procedure" in a science fair project. Do NOT give a numbered list of procedures; tell us in paragraph form how you went about devising a method to solve your research problem.
6. **There must be an experimental section.** Tell your readers **what** you used to solve your problem. If this includes special equipment, you need to mention it here. Pictures of any unusual apparatus you may have used may also be of use here. Description of your method is appropriate here.
7. **Results/Conclusions.** This is the crux of your poster. This is where you will report your processed and interpreted data. **DO NOT PUT RAW DATA HERE AT ALL.** Your readers are generally not interested in seeing the raw data you collect. They will want to

see the final results of your experiment here. Processed data may include the following: before and after photos, graphs, charts or any other data display method.

8. **Acknowledgements.** This is also an important piece. You need to acknowledge those individuals who may have contributed to your work in some way. Did your parents buy you stuff to help complete your project? Thank them here. Did your teachers help you by providing a room for you to work in? Thank them here.
9. **References.** If you did any background reading or research in order to help you devise your procedure, this is where you cite your sources. Use proper APA format.
10. **PROOFREAD! PROOFREAD! PROOFREAD!** Remember this is a professional presentation!!!


Sample Poster:



The receptor-binding domain of colicin N: a potential model for a membrane fusion inhibitor?

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Introduction

Members of the colicin family, which are highly toxic to Gram-negative bacteria, are classified by their receptor-binding domain (RBD) structure. These members are grouped into three classes: Class I, Class II, and Class III. Class I members are characterized by their ability to bind to the outer membrane of the host cell and form a pore. Class II members are characterized by their ability to bind to the outer membrane and form a pore. Class III members are characterized by their ability to bind to the outer membrane and form a pore.

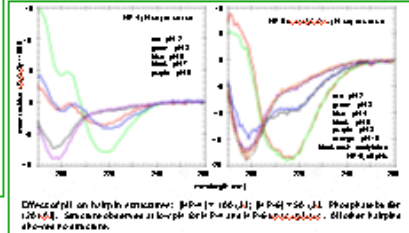
1) Location of receptor by characterizing presentation by covering of two secondary structure elements of which is a helix, the polypeptide chain. The helix domain structure is the receptor-binding domain (RBD) of colicin N. The helix domain structure is the receptor-binding domain (RBD) of colicin N. The helix domain structure is the receptor-binding domain (RBD) of colicin N.

2) Separation of the two secondary structure elements, forming a pore in the outer membrane of the host cell.

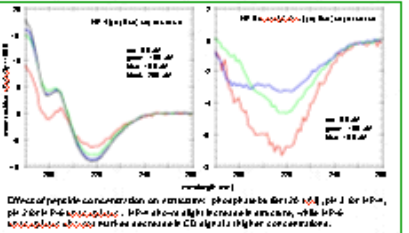
3) Engineering the helix-binding region of the receptor to increase binding affinity for other helix targets in a cell.

The purpose of this work is to investigate the binding properties of the RBD of colicin N when it binds to the outer membrane of the host cell.

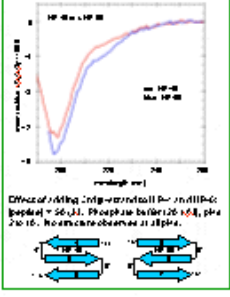
Results / Conclusions



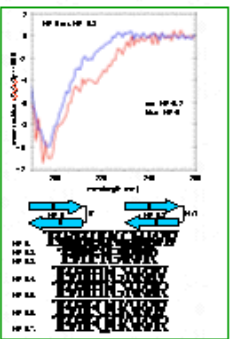
Effect of pH on binding affinity: $K_D = 100 \mu\text{M}$; $K_D = 50 \mu\text{M}$. Phosphate buffer 120 mM. Same observation at lower pH and higher phosphate buffer concentrations.



Effect of temperature on binding: $K_D = 100 \mu\text{M}$; $K_D = 50 \mu\text{M}$. Phosphate buffer 120 mM. Same observation at higher and lower temperatures.



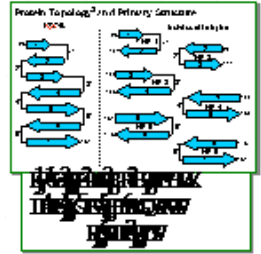
Effect of binding site presentation on binding affinity: $K_D = 100 \mu\text{M}$; $K_D = 50 \mu\text{M}$. Phosphate buffer 120 mM. Same observation at higher and lower temperatures.



Strategy

- investigate the ability of the RBD to bind to the outer membrane of the host cell
- investigate the ability of the RBD to bind to the outer membrane of the host cell
- investigate the ability of the RBD to bind to the outer membrane of the host cell

Research Topology and Primary Structure



Experimental

Synthesis and Purification

- synthesis and purification of the RBD
- synthesis and purification of the RBD
- synthesis and purification of the RBD

Characterization of the RBD

- characterization of the RBD
- characterization of the RBD
- characterization of the RBD

References

1. Chen, C.C.; Hsu, R.G. *Colicin*; Springer: Berlin, 2003.
2. Hsu, R.G.; Chen, C.C. *Colicin*; Springer: Berlin, 2003.
3. Hsu, R.G.; Chen, C.C. *Colicin*; Springer: Berlin, 2003.
4. Hsu, R.G.; Chen, C.C. *Colicin*; Springer: Berlin, 2003.

Acknowledgements

- The University of Texas at Dallas
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Sample of what Presentation Night Looks Like:

