BC493-004 Seminar in Biochemistry
Thursday @ 12:00 pm, Walnut 115
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MRB 275 (office)

Course Objectives:

- Develop your ability to determine the value and relevance of the original literature in biochemistry. This will be accomplished by in-depth exploration and oral presentation of a recent scientific paper.
- Practice in preparing and presenting an oral presentation. This is an essential skill for a successful career in biochemistry and is also required in the majority of careers. You will often be judged on the basis of your ability to speak to a group.
- Begin thinking and doing some groundwork for your Senior Thesis

Class Schedule:

August 29th: Introduction to the course.
September 5th: Tips on delivering an effective presentation.
September 12th – through the end of semester: Student presentations

Grading

1. **Presentation topic (10%).** The topic and a primary paper for your presentation will be due 10 days prior to your seminar to me by email or in person. Feel free to come and chat with me well before the due date to discuss possible topics and papers.
2. **Abstract of presentation (15%).** Due **one week BEFORE your presentation** (by e-mail). One page, with your own title, 1 ½ spacing, 12 pt Times Roman font, and written in your own words. Plus a list of the primary literature cited. Abstracts will be graded for *spelling and grammar*, as well as content, organization, and proper references.
3. **Presentation (50%).** Must be based on a research paper from the primary literature, with supporting papers (including review articles) to introduce and give perspective to the topic. Each presentation will be between 35 and 40 minutes with 5 minutes for questions.
    - Content of the presentation:
        - Understanding of the topic
        - Appropriate introduction and background
        - Discussion of methods and results
        - Conclusions
    - Quality of the presentation:
        - Delivery
        - Audience contact
        - Handling of questions
        - Visual aids
    - LENGTH (if your talk is shorter than 30 minutes, points will be deducted).

Abstract:

You must write a 1-page abstract that contains the following:

1. Your name, date, and title of your presentation
2. A description of the general research problem
3. Why you thought this paper was important
4. Why the research is important
5. A brief synopsis of the results of the research paper
6. A short conclusion
7. List the reference for the main paper(s) that you are discussing
8. **The abstract must be in your own words – not the abstract of the paper you select.**

The abstract should be tailored towards the readership (easy to understand without background information). It has to be in your own words. Use a short, general title (not the title of your selected paper or reviews). You should cite the reference of your paper/s in the following format (do not use the web address in your abstracts or the references presented at the end of the presentation):

> Authors (Year). Title. Journal, volume: inclusive page numbers.
> For example:
> Robzyk, K., Recht, J. and Osley, M.A. (2000). Rad6-dependent ubiquitination of histone H2B in yeast. Science, 287:501-504.

The abstract must be emailed to me at least 7 days prior to your presentation.

Preparing and Presenting:

General Considerations:

1. Content:

- Realize that different people have different perspectives and understanding of your topic.
- Don't start out by saying – 'I thought this would be a really interesting paper, but it turned out to be really bad'.... You'll immediately lose your audience.
- Make sure that you actually understand the points that you are presenting. Don't simply repeat points from the paper, don't simply repeat/memorize conclusions. Make sure you follow the author's arguments; make sure that the data supports the conclusions.
- Don't preface your discussion of a figure with 'I didn't really understand this experiment, but....'
- Bridge from simple to the complex.
- Only use known sources for your data and acknowledge the sources. This is especially important for web-based sources.
- Pay close attention to spelling!

2. Presentation style:

- Tell your audience why they should be listening to you. Give the significance (big picture) of the research in the beginning.
- Even if you write down your whole talk, still try to use 'spoken' language. A rehearsed talk given in written language is very hard to follow, and will come across as very formal and stiff.
- Your excitement or boredom about a subject tends to be highly contagious to the audience.

Format of the talk:

Aim for 35-40 minutes, followed by 5 minutes for questions. Points will be deducted if your talk is too short.

The general outline of a scientific talk is as follows:

- Broad Introduction
- Discuss original paper
- Conclusions / Future directions
- References used

Think of the talk as telling a story. Scientific experiments often follow logical (or serendipitous) arguments. Try to explain why certain experiments were done; try to find the 'logical thread' in a series of experiments. Good science is often like a good detective story. The best talks tell an interesting story that excites and involves the audience. Remember, you should read several papers – both reviews and other publications - as part of your preparation. This will help with background, setting the stage for the paper you will present.

➢ **Introduction**

- You need to develop sufficient background for the general listener to understand your talk.
- Better to over explain and have all your audience appreciate the importance of your topic rather than to confuse a portion of your audience with jargon and/or technical speech. Properly introduce the important concepts/abbreviations etc.

➢ **Discussion of the research paper**

- Progress smoothly into a discussion of the original paper(s).
- Describe the data using original figures. Do NOT include the original figure legends, they are not made for this format. Rather, explain and introduce legends on your slide. 'Walk' the audience through an experiment.
- When discussing more than one paper, describe how they complement / contradict each other.

➢ **Conclusions and future directions**

- Briefly review the major points of your talk ('Take home lesson'). Come back to the main questions / hypotheses stated in the introduction. What did we learn? What are the future directions?

➢ **References/citations**

- As a final slide, list your references. Give their full citation, including authors, paper title, year published, vol.#, etc.
- For material taken from the web, try to be as descriptive as possible. Give the title of the site and the web address.

Combating nervousness:

There is no remedy for stage fright, but you can make it more bearable and less noticeable by using the following tricks:

- Know your subject matter
- Be prepared
- Have EXCELLENT slides
- **Practice** your seminar out loud several times. Also recording it with your phone, then listening to yourself carefully, might help to eliminate filler words. . Practice in front of friends.

BC493 Seminar Evaluation

Speaker's Name: _____

Your Name: _____

Please be honest! If you didn't follow the talk, say so. It's not a reflection of your knowledge; it's the lack of the speaker's ability to communicate the big picture/experimental details, etc.!

(Circle one number: 5 is best)

Overall impression of the presentation:		1	2	3	4	5
Was the "big question" explained clearly?		1	2	3	4	5
Was sufficient background provided?			1	2	3	4	5
Were the methods understandable?		1	2	3	4	5
Were the results explained clearly?		1	2	3	4	5
Showed enthusiasm & maintained audience contact?	1	2	3	4	5	
Avoided jargon and abbreviations?		1	2	3	4	5
Repeated the essentials?		1	2	3	4	5
Interacted well with slides?		1	2	3	4	5
Spoke clearly, precisely, and at a good pace?		1	2	3	4	5
Questions answered clearly?		1	2	3	4	5
		POOR----------				EXCELLENT

State at least two aspects of the talk that you think should be improved:

State at least two aspects of the talk that you really enjoyed: