GUIDELINES FOR PRESENTATIONS

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"CURRENT LITERATURE IN GLYCOBIOLOGY" CMM 246/MED 246/BIOM246

The following set of guidelines for presenting papers is something that we usually give out to students and post-docs in advanced classes. It summarizes ideas accumulated over many years and has been modified by various investigators at different institutions. We are sending you a copy of these guidelines on behalf of the faculty involved in the Journal Club and will discuss this briefly at our first meeting.

Each presentation should be a 30-40 minute critical discussion of a recently (within the last 6 months) published original article relevant to the general field of Glycobiology. The topic of the paper should be outside your research area of expertise. Students and post-docs should consult with one of the course instructors regarding the choice of an appropriate article to present. Typically, the article should be either from a widely read general journal (e.g., Science, Nature, Cell, PNAS) or from a top of the line specialty journal (e.g., JBC, JCB, JEM, JCI, Nature journals etc. etc.)

1. **Paper Distribution.** At least 2 weeks prior to your presentation, email the paper to one of the faculty instructors for review and approval. The Education Coordinator will email the paper to all participants about a week prior to your presentation so that everyone can read it and be prepared.
2. **Introduction.** Show the title of the paper to the presented. Summarize briefly (10-15 minutes) the important facts and history needed for an intelligent but naive listener to place this paper in context. Why did you chose this article to present? What is known from previous work on this area? What unsolved questions are being asked? Why is the selected system suitable? Briefly introduce the glycan class(es) that the paper discusses. At the end of this section, stop and ask for any clarifications from the audience before proceeding with presentation of the paper.
3. **Critical Discussion.**

   i. Pose the question. For each Figure and Table in the paper, pose the question behind the experiment. Why did the authors do the experiment? What did they hope to learn or show? What's the hypothesis?

   ii. Explain the methods used. What experiments were done? Give enough detail in methods so that listeners can follow the experimental protocol. If appropriate, summarize the experimental protocol, pointing out the critical steps and showing the kind of data obtained. Present the general methods first, and the specific methods later, under each display item (figure or table) from the paper. Be prepared to answer questions from the audience about the details of the methods used.

   iii. Describe the results. In discussing results, show the original data. Make a slide of the table or figure, including the legend. If you are downloading from the web or cutting out from a pdf file, make sure to obtain a reasonably high resolution image. If a figure contains multiple panels, you may want to separate the figure into the different panels or panel clusters and present them on different slides. If the original data involves complex figures with lots of data, label the data yourself rather than forcing the audience to use the legend to decipher it. Likewise, if you have a table with lots of data, help the audience to focus on the critical data by highlighting. Ifthere are specific comparisons within a table that are important, you can facilitate those comparisons by color-marking the numbers that should be compared to each other. Explain any units of measure and error measurements.

   Keep slides simple and to the point. A simple rule is that you should talk about everything on slide. Don't clutter it

with information you do not plan to discuss. Remember, it is hard to listen and read at the same time.

iv. Outcomes. What were the controls? Were some controls missing? Control experiments are critical toevaluating the outcome of an experiment. If the experiment represented in a Figure or Table leads to a clear conclusion, it is useful to state it at the bottom of the slide.

4. Recapitulation and Conclusions. Summarize the major experimental findings, the authors' conclusions, and your assessment of their conclusions. Indicate the strengths and weaknesses of the paper. Indicate what questions remain unanswered and then mention the broader implications of the work. If you like, talk about what you think should be done next. End by asking for remaining questions.

COMMON MISTAKES TO AVOID

1. **Choosing too long a paper** --You will have 40-50 minutes at most to introduce and discuss the paper, plus 10-15 minutes for questions from the audience. Some papers are too long to present well in this time. In this case, you should cull through long papers and present only the critical data (choose carefully!).
2. **Choosing a poor paper** --Read the paper over and decide whether the significance of the work and its scientific soundness merits your taking the time to present it to the group. Don't assume that because the paper is published is a "top notch" journal, it is automatically a good article to present. As indicated above, post-docs and students should have their choice of papers pre-screened by one of the faculty instructors.
3. **Inadequate introduction** --You must give enough background so that the intelligent listener will knowwhy the work you describe was done and how the problem was approached experimentally. Do not waste time in the introduction giving too much background; tell us what we need to know to understand this paper--no more, no less.
4. **Failure to provide rationale for individual experiments** --Before you plunge into a description of a specific experiment, say why it was done. This sounds trivial, but it is the most common mistake in seminars, and it is easy to correct. State the question before describing the answer.
5. **Poor description of experimental results** --When you show a figure or table, point out immediately what is being measured; tell what each axis represents; say explicitly what each column in a table represents. Discuss all of the data in a figure or table, not just those selected numbers you judge most critical. If you are not going to present part of the data on a given slide, say so up front, and indicate why.
6. **Incorrect pace** --presenters commonly try to show their absolute mastery of the subject matter by discussing it at high speed. This is counter-productive; your listeners will stop trying to understand, and everyone's time is wasted. If you must err in pacing, err in the direction of going a little too slow.
7. **Advocacy of authors** --You are under no obligation to defend the author's conclusions; you didn't write the paper. Present the data as objectively as you can, state the authors' conclusions, and state your own reservations or conclusions. The idea is to be critical, and you should view the paper as if you were a journal referee, not a member of the author's group. If you are unsure of something, do not hide your ignorance.
8. **Distracting mannerisms** --Stand near the screen (not the projector), and use a pointer. When you use apointer, remember this is a seminar, not a fencing match; hold the thing still or put it down. Stand reasonablystill. Talk to the audience, not at the screen or the blackboard. Talk loudly, but don't shout.
9. **Not Practicing your presentation** privately before you give it in public. By practicing your talk, youmight discover an awkward slide, you might find that the pace is wrong, or that you need to think about an experiment further before you discuss it.