7.18 Day 21 Agenda

• Discussion section
• Polishing your writing
Elements of a Discussion Section

• Summarize findings presented in the Results section.
• State what you expected to find and why.
• Compare your findings with those of previous reports. Cite the literature!
• Explain (un)expected results: deduce and hypothesize.
• Point out shortcomings of your work and define unsettled points.
• Discuss theoretical and practical implications of your work.
• End with a short summary or conclusion about the work’s importance.

_The Discussion tells a story - or makes an argument - that relates to the “big picture” issues mentioned in your Introduction._
Example Discussion section from following article removed due to copyright reasons. Please see


1st paragraph: restates context & justification of work.
2nd paragraph: summary of conclusions; comparison to background
3rd paragraph: unexpected result & implications
4th paragraph: explanation of unexpected result
Example Discussion section from following article removed due to copyright reasons. Please see


5th paragraph: consistency of unexpected result with previous research
6th paragraph: explanation of other results; comparison with previous research
Example Discussion section from following article removed due to copyright reasons. Please see


7th paragraph: Model, hypothesis
8th paragraph: conclusion, summary, and future directions.
Polishing your Writing

• Topic sentences outline the development of your argument
• Topic sentence should reflect topic of the paragraph
• Smooth your transitions
• Be concise
Use active voice

We demonstrate a technique whereby the proteins of an entire cellular lysate may be separated on a gel, and subsequently...

The effects indicated several important results. Such results were a decrease in size when...
Don’t end with a preposition

The results should indicate which subtype, if any, the…oligomers have *the most affinity for*.

During increasing PCR cycles, each DNA segment will have an increasing number of overlapping partners that it can possibly *anneal with* in a cycle.
Avoid colloquialisms

… a clean band on the one hour slide, and a *blob* of fluorescence on the overnight slide.

… we will be able to manipulate the nanoparticles *to our liking* and possibly set up qualitative trends.
Avoid jargon

...we *PCR* added a sequence of 57bp to the C-terminus...

... as well as *PCRing* up certain DNA fragments using labeled primers.

Three labeled proteins...were *run* on a 15% SDS-PAGE gel with a 3% stacking gel, and then subsequently...
Upcoming assignments

Due Tuesday, 29 November:
  – Submit first draft of research paper or grant proposal.
  – Group meeting (optional): Dress rehearsal or Latest results.

Tuesday, 1 December until Thursday, 8 December:
  – Final lab presentations.

Due Tuesday, 13 December:
  – Submit final draft of research paper or grant proposal.
  – Class party.