Case 2:
Data Clean Up and Publication Delay

You are a senior graduate student in Dr. Matthews' lab. You have recently completed a series of experiments of primarily your own design characterizing the receptor for a new class of hormones. Part of the work you have done has been to study the binding characteristics and hormonal responses in tissue culture and in vitro, utilizing gels to character the molecular weights of receptor variants. You are now ready to prepare an abstract for an upcoming meeting and a paper for publication based on the work you have done. The abstract is due in one week.

While examining the accumulated data you notice that a number of cell culture plates failed to respond to the hormonal stimulus and that there was considerable variability in the dose-response relationship. Additionally, several of the gels are not as clear as you would like although they do demonstrate molecular weight, agonist binding and subunit characteristics of the receptor. Despite these issues, you're very confident that your results are correct and that your research is ready to be presented. Nevertheless, you hesitate.

Dr. Matthews is out of the lab and unavailable for consultation until after the deadline. You wonder if you should omit some of the data points and clean up the negatives for the gels, repeat some of the experiments (delaying publication and possibly missing the meeting) or go ahead with the data as is.

- What are the arguments for each of these courses of action (or any other course of action)?
- Why would you go ahead with or refrain from any particular option?
- What is the most appropriate course of action?

Case 2 Variations:
Data Clean Up and Publication Delay

The following variations of this case can be used to further explore the issues.

- You talk to a post-doc who is in the same lab, familiar with the work you have been doing and has offered helpful suggestions in the past. She tells you that as long as you're confident with your results you can "clean up" the data for a more aesthetically pleasing publication. Doing so will probably positively impact how your work is received and is something that "every other research out there does, all the time."

- Same case as Case 2 except that your data is publishable only in a second or third tier journal. Dr. Matthews believes with a few additional experiments your paper could make publication in a first tier journal. She asks you to hold off on publication until those experiments are completed.

- Dr. Matthews has asked you to hold off publishing your paper until the additional experiments are completed however you have finished your degree and will be leaving the lab prior to those experiments being done. Dr. Matthews tells you that Sally, another student in the lab will take over your work. You have concerns that after you leave, the experiments could be indefinitely protracted, leaving the possibly that you will either "get scooped" or that your work will become background to the subsequent experiments Sally will do and that you will lose your place as first author. As a recent graduate, you also have an interest in having a paper with your name on it published sooner rather than later.

- Dr. Matthews contacts you with the paper she intends to publish based on both your and Sally's research. Reading the paper you are concerned about the integrity of the research and analysis and you disagree with the conclusion the paper has drawn. Because of these concerns, you are not sure you want to be included as an author on this paper.