Student name
Graduate Student
Dept. Molecular Biology

date

Dear .....
This letter summarizes the comments given to me by your committee members. Its purpose is to let you know what the committee will expect from you when you take your preliminary exam next year. The overall view of the committee is that you work hard, you understand your experiments and that academically you are where you should be for this point in the Ph.D program. Below are more specific comments.

Knowledge.
You displayed an adequate understanding of ..... biology. However, before the qualifying exam you will need to read and understand much more background material ..... In particular, you should know .....

You should be able to explain .....

Also, you should develop a better understanding of research design. The logic for each proposed experiment and its likely outcomes need to be more fully developed and explained.

Finally, you should focus on how to explain in text, pictures and speech what the rationale behind each experiment is, and what the key results mean.

Writing
Your research proposal should explain what the large and small questions are, why each experiment is being done, and how possible results could answer these questions. In other words, you must spell out the significance and logic behind each experiment.

You need to write a better introduction, targeted towards a broad audience. In this introduction you should include what is known about the what you are studying, what is not known and how your project will address gaps in our knowledge. You should include the following:

- Here address specific terms in bullet point form

When presenting data in any form (writing or PowerPoint) you must ensure that the committee knows what work was performed by you, which data are published, and which data are unpublished.

Be careful to follow instructions on page limits when writing your proposal. There may be consequences in place by the time you take your qualifying exam for exceeding the page limits.

Scientific design and specific aims
This was by far your weakest section. From the proposal it was completely unclear to the committee members what experiments you intend to do in the coming academic year and why you proposed them. The **specific aims** (1 page only) should clearly outline the experiments that you intend to perform for your thesis. It should contain the following information:-

i) What is the big-picture question that you are attempting to answer.
ii) Why is this important to study.
iii) How does your system help you address this question.
iv) Your hypothesis.
v) What specific part of this big-picture question your experiments will address.
vi) Your Aims with a brief outline of the proposed experiments.

The experiments you design should clearly test your hypothesis. The specific aims and hypothesis are usually placed after the preliminary data section (diagrams are nice). Then you can refer to them throughout the experiments. The experimental design should be in essay format. If you use tables they must be numbered and referred to in the text. Alternatives and follow-up experiments should be mentioned.

PowerPoint presentation
On the whole your PowerPoint presentation was fine. Below are the comments made by the committee to help improve your presentation for the qualifying exam.

- When presenting an experiment with PowerPoint, you should explain what question it addresses, how it was conducted, how the data were collected, and the interpretation.
- It is understood that some of the preliminary data that you may present may not have been done by yourself. You must make clear in the presentation what experiments were performed by you.
- All data including graphs must be clear and in focus.
- For complicated figures here is the rule of thumb:- Introduce slowly. This can be done by using the power of PowerPoint – start with very little on the slide and then add data as you talk about it. Use colors to direct attention to the relevant point.

As a golden rule when you use PowerPoint, for each slide you should know what the take home message is and ensure that this is conveyed to your audience as you finish the slide. This sets you up nicely to ask the next question. That way, even if you loose your audience in the slide, they are drawn back into the questions that you want to address. For example after you have gone through your slide you should say something like: taken together this suggest *etc etc etc.* Therefore what we wanted to do next was ask *etc etc etc.*

Please feel free to contact me to discuss these comments.

Yours sincerely,

Katrina Cooper Ph. D.