

## **Writing lab reports for 9.12**

The aim of the report is to accurately document the procedures that are performed in an experiment so that someone else could reproduce them. It is extremely important to include all details that might be important for the experiment. On the other hand, do not overdo it : discard details that are irrelevant for the experiment. It is fundamental that you include a rationale of why everything is done in the particular way that it is done. Because we have already given the protocol to you, you don't have to "regurgitate" that information. The whole thing should fit in **3-4 pages** of text. You can include figures, photographs or printouts in an appendix to illustrate your point.

The main idea is that if someone reads your lab report they should be able to figure out the following items:

- a) what is the goal of the experiment (Explain what is it that you are going to do, and what is the logic of using the particular technique that you will use)
  
- b) what reagents and equipment are necessary (already in the protocol, no need to write it again)
  
- c) detailed protocol of the experiment (already in the protocol, no need to write it again)

concentrations of reagents...  
time of incubation....  
speed of centrifugation....  
voltage.....

- d) Observations: (This is NOT in the protocol, so write down your own observations of how things happened)

Steps that need special attention  
Difficulties  
Common mistakes to avoid  
Mistakes that were made

- e) Rationale of why things are done in a particular way:

The tubes were shaken because the ethanol and salt have to mix well for the DNA to precipitate....  
we used agarose at 2% because the piece to be resolved was 300 base pairs  
We used a newborn animal because neurons from adult animals do not survive in culture....

f) Interpretation of the results:

If something went wrong try to explain what happened  
Explain surprising outcomes