

## **LAB REPORTS FOR BACTERIAL GENETICS: WHAT TO INCLUDE (AND WHAT NOT TO INCLUDE)**

Your lab reports should follow all the same guidelines as before (as outlined in the lab report handouts and in the lab lecture on writing reports) but the following comments may help ease the confusion concerning this write-up.

You must incorporate the following two questions into the **appropriate** section of the lab report (as discussed in lab):

1. Why do we do dilutions in a viable cell count?
2. What are the probable sources of error?

The **RESULTS** section must include the following:

1. The raw data for colony counts from all of your dilution plates – 10E-5, 10E-6 and 10E-7
2. The average colony count for all three of your dilution plates
3. Concentration (CFU's per mL) of the original culture as calculated from your dilution plates
4. A table summarizing your growth/no growth data for the “Beadle and Tatum” experiment
5. Remember, the results section should include a paragraph describing your results. Figures and tables alone are not a complete results section.

The **DISCUSSION** section, In addition to an interpretation of the results (what do the results mean, what do you think the results tell us) the discussion section must also include the following (please note that the items below are not necessarily in the order that they should appear in your paper):

1. The order of the tryptophan(trp) pathway (substrates and enzymes). Should refer to a figure.
2. Explain how you used your results to determine the trp pathway
3. Include the enzyme deficiency of each bacteria mutant.
4. Explain any unusual results, such as very different CFUs for the different dilution plates.
5. Incorporate the questions (excluding question #5) on the last page of the Bacterial Genetics lab into your discussion.

### **DO NOT INCLUDE:**

1. B. subtilis data or the practice graphs that you did in lab.
2. Any material and methods that are not necessary. After stating the source of your protocol (or Materials and Methods) the only information you need to include are any changes to the protocol.

If you are unclear on any of the above items, please see your TA.