Genetics Day 1 Interpretation Questions 2/3/05

Interpretation Questions (General Information)

What is the purpose of these questions?

These questions are to be answered in your lab notebook under the heading "Interpretations." These questions serve a number of purposes: 1) to help you analyze the data you've collected in the lab each day; 2) to help reinforce the concepts described in the manual, in recitation, and in lecture; and 3) to help you put each day's experiment in the context of the module as a whole. Previous students have told us that working on the "Interpretations" section of their notebook helped them put the "pieces" of the module together, which was quite useful at exam time!

What collaboration is allowed?

While you may discuss your data with your laboratory partner, and ask the teaching staff or other students for clarification of what the question(s) are asking, each individual is responsible for writing up the answers to these questions independently.

Where will I get these questions for each laboratory day?

Interpretation Questions for each laboratory day will be posted on the course website on the "Labs" page. They will be available by the end of the lab day for each section (i.e. Tuesday afternoon if GEN Day 1 is held on Tuesday and Wednesday).

Do I have to write the question in my notebook as well as the answer?

While some TAs may not REQUIRE you to do so, we recommend that you do. That way, when preparing for exams, you can have the questions and answers all in one place. Also, if you misunderstand the question, your TA will be able to understand where your answer came from.

When are these questions due?

Your entire laboratory notebook entry (Title/Date, Aim, Chemical SOP, Protocol Questions, Data/Observations, Interpretation questions) for GEN Day 1 are due at **1:05 PM** on **GEN Day 2.** Don't forget, you will also need to complete your prelab preparation for GEN Day 2 by this time as well!

Where do I turn them in?

There will be a collection box located in the recitation room (if recitation is first) or just inside the door of the laboratory (if lab is first) for you to turn in these sections. Please place your notebook pages into the drawer labeled with your TA's first name so that we can give you credit for the work you've done. Late notebook entries will receive **NO** credit.

I noticed that, for each experiment, the first "question" is usually "Interpret your data." What does this mean?

This is an opportunity for you to tell us what you learned each day in lab! Your interpretation should relate to the goals of the experiment that you described in your "aim." When drawing conclusions, be sure to refer to the data that support your conclusions! Also, if you make any errors in performing the protocol, note these and predict what effect the error may have on your results.

GEN Day 1 Interpretation Questions

Experiment I-A: Bacterial Growth in Liquid Media

1. Interpret your data!

2. When performing serial dilutions of KBS1 cells today, it was important to change tips between each step of the dilution, and to make your dilutions in saline and not the media. Predict how your cfu data will change (# of colonies will increase? decrease? stay the same?) if you FAIL to perform the protocol correctly.

Experiment I-B: Streaking Bacteria on Agar Plates

1. You don't have any data to "interpret" yet, so instead **predict** the phenotypes of each strain (BK3, EJI, H33 and JET3) on the five different indicator plates (Mac Ara Kan, Mac Lac Kan, LB Kan, LB Cm, and LB Ara Xgal Kan). Explain your answers by explaining the function of the indicators "MacConkey," "Xgal," "Kan," and "Cm."