LAB NOTEBOOKS

The laboratory notebook is the record you keep of the method and the results of your experiments. Your lab notebook should be clear and thorough so that anyone with some knowledge in science (including yourself) is able to interpret your notes and reproduce your results. Your lab notebook should be a defense against, not a proof of, fraud!

Foster lab requires you to maintain a bound lab notebook. Data should always be entered in the notebook; however a copy can be maintained on computers or online.

- **Notebooks must never leave the lab.**
- Use of pen in notebooks is preferred. Pencil can be used; however mistakes should not be erased, just scratched out.
- Write page numbers (if pages are not already numbered), experiment and date on all pages and data, including print-outs and photographs.
- Table of contents must be maintained, with experiments listed by title, date and page number.
- All notebooks must be numbered and the project name should be clearly stated.
- NEVER dispose your old notebook, or the ones you find in the lab.
- Keep background figures related to your project(s) on the last page of your notebook for quick referencing.

The record of every experiment should contain:

1. Date: Put a complete date on every page (including continuation pages).
2. Title: Write the title on top of every page (brief is best!). Example, “pH dependent oligomerization of Anti-TRAP”.
3. Goal: This is an extension of the title. Example, “To carry out fplc purification of anti-TRAP”. The title and purpose may be combined.
4. Materials used: What is required and how much. All the relevant information must be noted; including type of material, lot number, identifier, pH (if buffers are involved), concentrations, sterilization technique used and storage conditions.
5. Description of experiment: The protocol for the experiment could be written down before you begin, and amended as you do the experiment. Always give a reference of the protocol being used (the notebook name and the page number or the SLAM ID, if available). Record calculations for concentrations, dilutions, and molecular weights.
6. Data: Everything that happens- and doesn’t happen- is data. Include all controls as data, including standard curves and 0 time point numbers. Tape all print-outs and pictures in the notebook. Whenever possible, maintain copies of the data online or on a lab computer in an orderly manner. Always maintain a copy of such data on “fosterlab” shared folder.
7. Summary of results: At the end of the accumulation of the data, write a brief summation of results of the experiment. Note any oddity or aberration, and add any comments about why the experiment may or may not have worked. If you choose to omit a data point from your result analysis, mention why you did so.
8. Make a plan: Think about what your data might mean even if you do not completely understand it at that point. It is good practice to make a note of what you plan to do next or how you think your results are useful.

It is important to write in the correct tense. The reader should be able to differentiate between what you have already done and what you plan to do. Record everything as soon you can!