vonHoldt Laboratory Safety Guidelines

Princeton University EEB

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You CANNOT begin any laboratory research unless you have completed the Laboratory Safety Training in Sections 1 and 2.

1 Environmental Health and Safety Training

Please review/enroll in the following safety and chemical hygiene items (check the box as each item is completed):

1. Laboratory safety (3 hours course; please enroll at www.princeton.edu/training) [ ]
2. Fire safety [ ]
3. Biohazards handing and hazard wastes [ ]
4. Chemical fume hood [ ]

2 vonHoldt Lab safety protocol

Please read the wiki of laboratory safety issues, emergency information and procedures, and Standard Operating Procedures (SOPs). Techniques change and often new methods that avoid using carcinogens or mutagens in daily laboratory protocol become commercially available. Make sure you are familiar with the lab manual for each experimental procedure *before* you begin ***ANY*** laboratory work.

3 Gaining experience in the lab

Once the safety training is completed, you can begin your laboratory research under the supervision of a graduate student or post-doctoral researcher. Make sure you are familiar with the lab manual for each experimental procedure *before* you begin ***ANY*** laboratory

work. Laboratory techniques will be demonstrated to you and you are expected to follow good laboratory methods and be aware of the the laboratory community. Please pay special attention to the following:

1. Clean up the laboratory benchtop space after you are done working.

2. Empty bench top trash into the appropriate receptacles (*i.e.* biohazard containers, general laboratory trash contains, recycle bins, etc).

3. Make your own aliquot of stock solutions (to avoid contamination).

4. Label and date EVERYTHING.

5. If you borrow reagents, you must return them.

6. Know where the first-aid kit is located.

7. **DO NOT WEAR GLOVES AND LAB COATS OUTSIDE OF THE LABORATORY. DO NOT USE COMPUTERS OR ANSWER PHONES WHILE WEARING GLOVES.**

8. Make sure the laboratory door is locked if you are the last one to leave, and please turn off lights.

9. Please turn off equipment if it is not in use.

10. If you use the last of the supplies (such as tips or gloves), please restock these items. Also note if they are running low so we can order more.

11. If you *uncomfortable at all* with any laboratory technique, please do not attempt the procedure and *ask for guidance*.

Your supervisors (graduate student or post-doctoral researcher *and* Dr. vonHoldt) are responsible for you. Please make every effort to be a good laboratory citizen. The Wayne lab is filled with friendly and knowledgeable people. Please ask questions when you are at all uncertain about your technique, procedure, or project. Please make every effort to attend our weekly laboratory meetings, as this is an important forum for meeting the lab members and keeping up-to-date on issues in the lab (i.e. new techniques, current research projects underway, presenting your own work, etc.).

4 Potential laboratory hazards

Most laboratory work is non-hazardous; however, there are a few protocols/reagents/chemicals that need extra attention. The following are some hazards of which to be aware, but this list is not exhaustive. If you have further questions, please address the SOPs and the Material Safety Data Sheet (MSDS).

1. Be careful when working with an open flame and ethanol (i.e. during DNA extraction protocols). Please keep the flame away from any containers of ethanol. You MUST wear a lab coat when working with any flames.

2. Be careful when working with concentrated bleach.

3. When making an agarose gel, please be aware that *boiling agarose is highly viscous and can boil upon stirring or even slight disturbances*. After heating to boiling point, carefully remove from the microwave using a glove and allow to cool on the benchtop **BEFORE** pouring into the gel mold. If the super-heated agarose is poured directly into the mold, it can damage the mold and chamber. Allow the agarose solution to cool nearly to room temperature (or cool enough to touch the beaker) before pouring.

5 Now... go work!

We are here to teach you how to conduct the best possible research and learn new/interesting molecular skills. If you have any questions, please ask!