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UTK Laboratory Orientation/Training

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The Aquatic Microbial Ecology Research Group - AMERG (The Buchan, Zinser and Wilhelm labs)



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ABSTRACT

Welcome to the Wilhelm Lab. This short training is to help orient those that are learning how to work in a laboratory environment as well as help those that are joining our lab to become acquainted with our procedures.



Laboratory
Orientation_GRL.pdf

- **Safety** - # 1 priority – we have several hazardous agents in our laboratory and your safety, and the safety of others is the most important thing here. If you notice anything unsafe or feel that the situation you have been placed in is unsafe, please immediate lab supervisor and PI know so steps can be taken to ensure everything is in proper working/safe order.
- **Lab Space** – we have a large laboratory with several people sharing spaces as well as having “personal” space.
 - General Laboratory Space – these areas are used by everyone in the lab and should be clean before and after you use them. Nothing should be left there overnight. You do not know who may need the space before you return. If it is critical that something not be moved, then leave a note making the next person aware of the situation.
 - oYour personal laboratory space should be kept in a neat and orderly manner as to ensure that everyone is safe at all times.
 - **Labeling of ALL bottles/tubes/etc... - ALL** bottles/tubes/etc... containing liquids, solids, powders or any other material ***MUST*** be labeled. **This is an OSHA requirement and must be followed.** If unlabeled items are found during an environmental safety inspection by the University, your PI/supervisor will receive notification of the violation.
 - **Suggestions for labels**
 - add your initials/name so we know to whom it belongs
 - date made
 - expiration date
 - storage conditions
- **Equipment** – We have multiple types of analytical pieces of equipment in our laboratory. You ***may NOT*** use any equipment without first being trained by the appropriate person. Several pieces of equipment that we have can be “delicate” and improper usage can cause thousands of dollars-worth of repairs to be made. You must also “log in” in the appropriate Log Book whenever you are using a piece of equipment. These notebooks are necessary for keeping the equipment properly maintained as well as information that can be very useful if something goes wrong (that way we can find out what was in a sample, etc... so the proper repairs can be made for minimal cost). Training is required for many laboratory items listed under the OJT (On the Job Training) section of this safety manual such as the following items:
 - Microscope
 - Balances
 - Sonicator
 - Image Analysis System
 - Spectrophotometers
 - PCR Machines
 - Glove Boxes
 - Milli-Q Water System

- **Ordering** – Your PI will review ordering and procedures with you. Be sure to allow for delivery time when you are planning your experiments and items need to be ordered.
- **Notebooks** – Laboratory notebooks are recommended and are to be kept in the laboratory. When keeping your notebook be sure to keep as detailed information on the items used and procedure as you can. You want to be specific enough so that if someone came behind you to repeat the experiment, they will be able to do so without having to hunt you down. If you are continuously repeating the same experiment, then reference the pages where it is written step by step and then just write any exceptions and your results. A good example of what to include would be:
 - List of reagents used in that particular experiment
 - Catalog #, lot # and manufacturer of chemicals
 - Procedure followed
 - Printout of results included (i.e. chromatographs, picture of gels, etc...)
- **General Laboratory Etiquette** – when working in a lab remember that courtesy will go a long way.
 - DO NOT borrow other peoples' items without their permission. You do not know how something was prepared and if what it is labeled is actually what you are needing.
 - If you borrow something, return it to the place that you got it from.
 - If you use a general laboratory space, then leave it clean and ready for the next person to use.
 - If you share space with someone else, please be courteous and leave it clean and ready to use.
 - Plan ahead – equipment and general areas in the lab are used by multiple people. Be sure to check for availability prior to starting a lengthy experiment. Your priority is NOT someone else's priority. **Some items have sign-in sheets which need to be used.** If no one has signed up to use something, then it should be available. Be sure to think your experiments through prior to starting to be sure everything you need is there/available.
- General disposable supplies – we have lots of supplies in the lab used by everyone. **If you are using something and notice that the item is low or completely out, please be courteous and fill it back up. If you take the last box of something, be sure to place an order request with all the necessary information so that it can be re-ordered in a timely manner.**

_____ I have seen the Safety presentations.

Initials

Signature Date

Trainer Signature Date



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