GOOD LABORATORY PRACTICE HANDOUT:
HINTS AND TIPS ON CLEANLINESS AND STERILITY

- ✓ *What stuff should be sterile and what not?*
  Everything that involves live cultures must be handled in a STERILE environment (inside the bio-safety hood and with sterile pipet tips, culture tubes, etc.). Anything else in the lab, including purified DNA does not require a sterile environment.

- ✓ *Is there a possibility of being non-sterile even inside a bio-safety hood? If so, how can I prevent contamination?*
  YES, there is!!!
  - Try to restrict your work area to approximately 6 inches or more from the border of the vent because anything outside this space is in contact with outside air, and is therefore non-sterile.
  - Also a general good practice (*completely optional*) is to spray some isopropanol in your gloves outside the hood and immediately bring them inside. Rub your hands together inside the hood until the gloves are *completely dry*, otherwise you are at risk of contaminating your samples with isopropanol, which is bad.
  - Always use your own set of sterile pipet tips. You don't know if your lab partner is as careful as you are, so you are safer if you avoid borrowing stuff.
  - If you are pipeting and the tip touched anything inside the hood (the metal, the ice bucket, your glove, the tube you were pipeting into, etc…anything!) CHANGE IT!!! It is no longer sterile.
  - Anything in the lab that has a black and white tape on it has been sterilized, so please be kind with your fellow labmates and do not open sterile items on your bench, take them to the hood.

- ✓ *How often should I change the pipet tips when using the miniprep kit buffers?*
  You should change the tip if you touched anything dirty, like your glove or the tube you where pipeting into. This is not only to protect your sample, but to protect the buffers for future users!!! Even if you haven't touched anything, it is recommended to change the tip regularly to ensure you are pipeting the right volume (air bubbles in the tip can cause errors in the volume being measured).

- ✓ *Is there a rule for pipeting cold items (solutions)?*
  Well, if it was stored in a fridge it's for a reason…it has to be kept cold! In order to preserve them for future use, be nice and go get some ice in the bucket to place your items. Especially if you don't know how long you'll be working with it. This includes antibiotics (ampicillin tubes), buffers for restriction enzyme digest, glycerol solutions, etc.

- ✓ *Which areas am I responsible for cleaning?*
  Everyone in the lab has a personal designated area (bench) and it is your responsibility to keep it clean. Also the common use stations are EVERYONE'S RESPONSIBILITY. The list of common areas includes, but is not limited to:
  - *Electrophoresis station* – It is your responsibility to rinse and store the horizontal electrophoresis items in the designated drawer after you are done.
  - *Microcentrifuge station* – It is your responsibility to clean any spills (no matter how small) and to maintain the area clean after each use. That includes placing the miniprep and gel extraction boxes back in their place.
  - *Gel development station* – This is a very dangerous area because it is contaminated with ethinium bromide, which is a mutagen. When working in this area you should wear all your personal protective equipment (lab coat, gloves and safety glasses). It is everyone's responsibility to prevent contamination of other areas with ethinium bromide, so please change your gloves after working in this station.
  - *Biosafety hoods* – It is your responsibility to clear the hood after you are done. This means remove any pipet tip boxes, solutions, ice bucket, etc.
  - *Weighting station* – The balances are very delicate instruments and we want to keep them calibrated so handle them gently (do not hit the bench while measuring, etc.). It is your responsibility to clean any powder spills.

One last thing:
If you are unsure about the disposal of any material, ASK FOR HELP!!! The graduate students and Prof. Prather are here to help so ask as many questions as you need to feel comfortable working in our lab.