Questionnaire

Part I. Background information

1. Gender: ____
2. Identification:

   A. Undergraduate student B. graduate student C. PhD student D. Post-doc

   E. Others _____
3. Lab description (main program) : _____
4. How long have you been in this lab: _____

Part II. Bio-safety: general issues

1. Do you know the biosafety level (BSL) of your lab?
   ☐ I ☐ II ☐ III ☐ IV ☐ I don't know
   The basic requirement of this level is _____

2. Have you received any biosafety education when entered this lab? If yes, how?
☐ Yes _____
☐ No
☐ Not sure

3. Here are some descriptions of the genetic manipulation in the following, have you done it that way? Multiple Choice

A. Standard precautions are always followed, and barrier protections applied (gloves, gowns, eye protection).

B. Make risk assessments when manipulate genetically modified microorganisms.

C. The objects or materials have been effectively decontaminated or disinfected by an approved procedure before discharge.

D. Air grills will not be blocked with notes, pipettes or other materials.

E. Open buckets or rotors after aerosols have settled or in a biological safety cabinet when using centrifuges. Use sealable buckets or sealed and tube breakage rotors.

4. When someone is doing inappropriate manipulations, would you stop him/her?
☐ Yes, I stop him/her by_____
☐ No

5. Do you know any national law concerning about biosafety?
☐ Yes _____
☐ No

Part III. Bio-safety: the horizontal gene transfer

1. Which are the **consequences of horizontal gene transfer**? Multiple Choice

A. Variation and evolution could be produced by the process of genetic transmission from parents to offspring

B. Some pathogenic bacterium will carry genes encoding antibiotic resistance

C. Evolutionary rate of indigenous flora would speed up.

D. The possibility of bacteria spontaneous lysis will be remarkably increasing after the gene horizontal transfer

2. Here are some stories happened in a laboratory, which ones do you think would possibly **cause** horizontal gene transfer? Multiple Choice

A. Jim planned to do miniprep. When he stopped the shaker, he found that some of tubes fell down and liquid broth was releasing. He continued the experiment simply after spraying the shaker with 75% ethanol.

B. When the experiment was finished, Jim still had liquid broth left in tubes. Then he poured the liquid into the drain.

C. When doing the transformation, Mario was stuck because culture dishes are insufficient. However, he realized that with different gene reporters like *gfp* and *yfp*, samples could be differentiated by colors. Then Mario finished the coating job by mixing up some of samples.

D. Merlin wanted to analyze the toxin produced by bacteria. However, he noticed some contaminated microbes growing in culture dishes, and was curious about the characteristic of these bacterials. Merlin didn't think they would carry any toxic gene and hardly took any protective measures in the following.

3. What do you think are appropriate ways to **eliminate** effects of HGT? Multiple Choice

A. The physical containment of labs is divided into several classes.

B. Eating or storing food in labs is forbidden.

C. Waste of lab and the work surfaces are decontaminated daily.

D. Bacterial or biological waste would be autoclaved before disposal.

E. Take more biosafety considerations when inserted DNA sequences are not well characterized, such as preparing for genomic DNA libraries.

4. Have you ever taken HGT into consideration when design your experiments?

☐Yes ☐No ☐Not sure

If yes, what **measures** have you taken?

_____

5. Questions or comments are welcomed!

_____

Thank you very much for your cooperation!