

## **Virtual Lab Assignment- Unknown Lab Report**

For this assignment, you will be given a set of results that came from a **mixed broth culture of 2 bacteria**. You will characterize your 2 types of bacteria by colony morphology, cell shape, size, gram reaction (positive or negative), production of the enzyme catalase, and ability to hydrolyze starch. Please note that different students will receive different sets of data, so each student's report will contain different information.

Using the information provided to you, you will be submitting a **formal report** with the following information:

- a. Purpose
- b. Materials and methods. Note that the techniques used to obtain these results will each have their own set of materials and methods. You can reference previous labs from the lab manual for each technique. The catalase test and starch hydrolysis test are tests that you have not done in any of your virtual or in-person labs this semester. As such, you will need to find an external source for the methods used to perform these tests. The American Society for Microbiology (asm.org) is an excellent resource for common lab protocols.
- c. Results
  - i. Clearly labelled drawings of your 2 different bacterial colonies, with size, shape, colour and texture information summarized beneath each drawing. Please include a scale bar as part of your drawing.
  - ii. Clearly labelled drawings of the 2 different bacterial cells identified by gram stain. Each drawing should occupy approximately  $\frac{1}{4}$  of a page, should only include 4-10 cells, and must contain a scale bar.
  - iii. A table summarizing the results of the gram stain (shape, size and gram stain reaction), catalase test and starch test for each of your bacteria.
- d. Discussion
  - i. Restate the purpose in different words.
  - ii. Write (not point form!) a concise summary of your results for each bacterium. You do not need to attempt to determine what bacterial species you have, just assign them as A and B.
  - iii. Brief concluding statement.

**The lab report is due on \_\_\_\_\_.**