**Pre-Lab Assignment 1: Microbial Growth (12 points)**

Pre-lab assignments are designed to get you thinking about the upcoming experiment and experimental design process. Before beginning this assignment please read the lab notebook module related to Microbial Growth.

To help with your understanding of this topic and help to prime your thinking about this experiment we want to know what you know and what you don’t know about microbial growth, antimicrobial agents, antibiotics, and disinfectants.

1. Please list 4 things that you know for sure about microbial growth, antimicrobial agents, antibiotics, and disinfectants (1 point for each complete statement).

* There is a fast genomic adaptation of bacterial organisms to environmental fluctuations.
* Bacteria has very short generation times, which helps them succeed in their environment.
* Bacteria can be cultured or grown on a petri dish of agar and nutrients, which is like a solidifying agent.
* Bacteria are categorizable based on differences in cell wall composition.

1. Please list 4 things that you think you know about microbial growth, antimicrobial agents, antibiotics, and disinfectants but you are not sure about (1 point for each complete statement).

* Microbial growth is relatively quick especially if the bacteria is in an optimal environment.
* Bacteria’s ability to grow resistant to antibiotics causes resurgences in diseases that were previously thought gone.
* It is harder to develop treatments or antibiotics against certain bacteria compared to others.
* Narrow-spectrum antibiotics can be more useful against specific types of bacteria than broad-spectrum antibiotics.

1. Please list 4 things that you feel you need to know about microbial growth, antimicrobial agents, antibiotics, and disinfectants before beginning this experiment (1 point for each complete statement).

* The specific information on the types of bacteria being studied in the lab experiment as well as the procedures on how to safely handle it.
* The biological composition of the bacteria being studied.
* The ways in which antibiotics or disinfectants work on bacteria.
* The speed in which microbial growth is carried out.