

## **Lab B - Epidemiology & Lab Techniques**

Epidemiology is the study of diseases and epidemiologists investigate the sources, routes of transmission and patterns of infectious diseases. In this lab exercise, you will simulate the spread of a viral epidemic using an E. coli K-12 strain. You will analyze your data in the following lab.

After the epidemiology exercise, you will get to know the most commonly used instrument in molecular biology - the micropipetter. You will learn the proper procedure for operating pipetters during this exercise. Then you will use the pipetters to learn how to use laboratory techniques that you will need to know over the course of the quarter.

### **Concepts:**

- Disease transmission
- Preparing a serial dilution

### **Skills:**

- Labeling, handling and streaking an agar plate
- Proper use of micropipetters
- Loading an SDS-PAGE gel
- Loading an agarose gel
- Loading a 96 well microtiter plate
- Performing a serial dilution
- Proper use of a spectrophotometer