

Lab 2 - Introduction to ComGen and Molecular Biology Techniques

Objectives:

- Implement use of standard molecular biology lab equipment (pipetters).
- Understand safety measures in a molecular biology laboratory.
- Describe the significance of *Pseudomonas fluorescens*.
- Describe the National Science Foundation project we are involved with.

Before lab:

1. Read this article on Wheat Take-All and the role of *Pseudomonas*:
<http://www.ars.usda.gov/is/AR/archive/aug95/wheat0895.htm>
2. Read the following site's description of the pipetters so that you are prepared to use them during lab:
<http://www.bio.davidson.edu/courses/bio111/bio111labman/preface%20d.html>.

In lab:

Practice using each of the sizes of pipetters. Make sure that you know which tip works best with each pipette. You should know what 1ul, 10ul, 100ul and 1000ul looks like in a tip before and after dispensing. This will ensure that you are pipetting accurately. This is crucial to the success of your experiments.

In the background:

- A brief description of what pipettes are used for and the different sizes of pipettes
- A brief explanation of the proper care and usage of pipettes

In the materials and methods:

- A thorough description of how to properly pipette a given amount of liquid, with every step listed

In the results:

- A description of the appearance and type of tips used for each size pipette

In the discussion:

- Any special precautions you found you had to take in order to pipette the proper amount of liquid?
- How can you make sure that you are pipetting the correct amount?
- How can you make sure that you are consistently doing it correctly?