113 Lab Learning Objectives

Week 5: synthetic lab #4

Learning Objectives for Promoter Discovery

Skills

- Properly manipulate bacterial cultures to maintain clonality of cells.
- Quantify red fluorescent protein levels in populations of *E. coli* cells.
- Enter data into RFP database.

Cognitive

- Employ a scientific approach to answering biological questions and test hypotheses.
- Analyze experimental data and reach logical conclusions.
- Describe the big idea of information based on lab experiences.
- Review the information contained within promoters.
- Use protocols for molecular biology to clone DNA.
- Interpret Synergy data for fluorescence and optical density.

Week 5: Information and Natural Selection lab #1

Learning Objectives for Environmental Information and Natural Selection

Skills

- Utilize online resources to determine genetic basis for PTC tasting.

Cognitive

- Employ a scientific approach to answer biological questions and test hypotheses.
- Analyze experimental data and reach logical conclusions.
- Describe how environmental information influences natural selection.
- Explain what TAS2R38 has to do with taste and natural selection