**Week 4: Genotype plasmid, prep oral presentation**

Learning Objectives for Promoter Discovery

*Skills*

* Run gel electrophoresis
* Interpret results from PCR genotyping.

*Cognitive*

* Employ a scientific approach to answering biological questions and test hypotheses.
* Analyze experimental data and reach logical conclusions.
* Organize the information you have learned about testing promoters by GGA.

**Pre-Lab**

1) Watch 2 videos from list for week 4 lab  
[www.bio.davidson.edu/people/macampbell/113/2iterationsGGAstudentF2022.html](https://www.bio.davidson.edu/people/macampbell/113/2iterationsGGAstudentF2022.html)

2) Answer each of these four questions in two sentences or less.

A) How does PCR work and what does it produce? What are the ingredients for PCR?

B) How are we using PCR to determine whether we cloned the desired promoters or not?

C) What would the PCR results be if you have, or have not, successfully cloned the promoter?

D) What would you do differently if you had a chance to start over now?

**Information: Complete Plasmid Genotyping**

In Lab

1) We will use gel electrophoresis to separate the PCR products based on the length of amplified DNA.   
[gcat.davidson.edu/GcatWiki/index.php/Gel\_Electrophoresis\_for\_Bio113](https://gcat.davidson.edu/GcatWiki/index.php/Gel_Electrophoresis_for_Bio113)

2) While the gel is running, your group should continue working on your graphs to get them presentation-ready.

3) Your group should make one PPT file (not Google slides) that you will use for your oral presentation two weeks from today. You will add today’s gel electrophoresis results to your PPT file. Clear communication is the hardest part of science so take your time to make it look professional. Knowing how to make a good PPT slide deck will help you in many jobs and internships.

4) Complete CATME.