**Bio113 Research Project Final Analysis**

***Replace all italics text with your own. Keep text not in italics.***

*Lab group (day and color)*, Fall 2022

*Authors (your name first, then other 3 collaborators)*

**Introduction** *(limit 200 words) What was the goal of your research? What were you testing and what did you hypothesize might happen? Include in-text citations (name, year) for research papers about your promoter(s). Connect this project to what we have learned in class.*

V1 promoter: *promoter name (dsDNA; sticky ends underlined)*

V2 promoter: *promoter name* *(dsDNA; sticky ends underlined)*

Hypothesis V1: *in 2 sentences or less, explain how you thought this promoter would function.*

Hypothesis V2: *in 2 sentences or less, explain how you thought this promoter would function.*

**Methods** *Name the plasmid into which you cloned your promoters, the cloning method used and the growth conditions for your cells. Don’t bother with transformation and plating details. Stick to the liquid cultures.*

 *insert graph for V1 here insert graph for V2 here*

 A B

**Figure 1.** *Write a legend that explains how the data for panel A and panel B were collected and what the error bars represent. Use the part numbers to name your two promoters. Make sure all font sizes are big enough to read at this size scale. Do not use a graph title, the legend serves this purpose.*

**Promoter Function Results** *Write one paragraph to interpret your results from promoter V1. Refer to Figure 1A to support your interpretation. At the end of this paragraph, clearly state whether your hypothesis was supported or disproven.*

 *Write a second paragraph for your promoter V2 using the same structure as the previous paragraph.*

top oligo v2:

 promoter X1:

 promoter X2:

 promoter X3:

 promoter V1:

**Figure 2.** *Use the size 10 courier font in the figure above so you can align the sequences and fit them in one line each. I have provided you with the promoter sequence of pClone Red with the sticky ends removed. If any bases are mutated, make the mutations bold and underlined. Do not include your sticky ends in this figure.*

**Sequencing Results** *Write one paragraph to interpret all of your sequencing results. Did your V1 and V2 promoters match the sequences that were submitted for synthesis? If not, point out the mutations in the figure and address how mutations might have affected your fluorescence data. At the end of this paragraph, clearly state whether you tested the intended promoters or not.*

**Conclusions** *(limit 200 words) Summarize the take home messages for your two promoters. Clearly restate your two hypotheses and whether they were supported or refuted. Use the part numbers to name your two promoters. Connect your conclusions to what we have learned in class and what you said in your introduction. However, don’t simply use the same sentences again.*

**References** *(alphabetical order by last name of first author)*

*Lab manual*

*Textbook*

*Research papers for your promoter(s)*