# Case Study 2

BIOE 498/598 PJ

Spring 2021

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- Your goal is to find the minimal set of amino acids that supports growth of an unknown bacterium.
- ▶ There are 20 amino acids = 1,048,576 possible combinations!

#### Rules

- Your team will have 96 experiments split over two rounds. You decide how to split your runs between rounds.
- ▶ Each amino acid can be tested at two pre-determined levels (-1 and +1).
- After the two rounds, your team will predict four "final" combinations.
- ▶ The team with the smallest combination that grows (most -1's) wins!

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- You will not know the identity of the amino acids.

## Logistics

- By Friday 3/5, your team will need to have a design for your first round of runs.
- ▶ We will provide a template for entering your designs.
- We will try to run the experiments the following week. After receiving the data, you will have another week to design your next round of runs.