1: Growth Curves for Lactobacillus Plantarum

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**Overview and goals:**

The goal of this experiment is to determine the growth curve parameters for our two Lactobacillus strains: one with GFP and one with mCherry. This should give us a baseline dilution rate to calibrate a chemostat with the robot.

At the end of this experiment we should:

* Know the growth rate of LP\_WF\_GFP and LP\_WF\_mCherry

**Three days before Experiment:**

* Streak LP\_WF\_GFP and LP\_WF\_mCherry from Glycerol on plates of MSR+CAM. Grow up to 24 hours.
* Prepare MSR+CAM
* Prepare PBS+CAM

**One day before the experiment (4/6):**

* Grow3 tubes of LP\_WF\_GFP and LP\_WF\_mCherry from 3 separate colonies from plates in 3 mL MSR+CAM

**Day 1 (4/7):**

* Dilute LP replicates in MSR+CAM to an OD of 0.5. Read the OD using the cuvette reader in lab
* Mix 24 uL of LP with 216 uL of MSR+CAM according to the spreadsheet in this folder. This is our 1x.
* Use multichannel to transfer 40 uL to 6x dilution in PBS+CAM.
* Repeat for 36, 180x dilutions.
* Place in plate reader at 25C and grow for 48hrs

**Day 3 (4/9):**

* Collect OD data and analyze for time to exponential threshold (dilution time) and/or growth rate, which we could use for dilution rate.