

# M1D2: Develop experiments to test loading variables and quantify growth rate

09/15/16

1. Communication lab workshop (56-302)
2. \*Short\* Pre-lab Discussion
3. Instructor Check-in: design parameters
4. Load CometChips,  $\frac{1}{2}$  in TC and  $\frac{1}{2}$  in main lab

# 3 experiments, 2 chips:

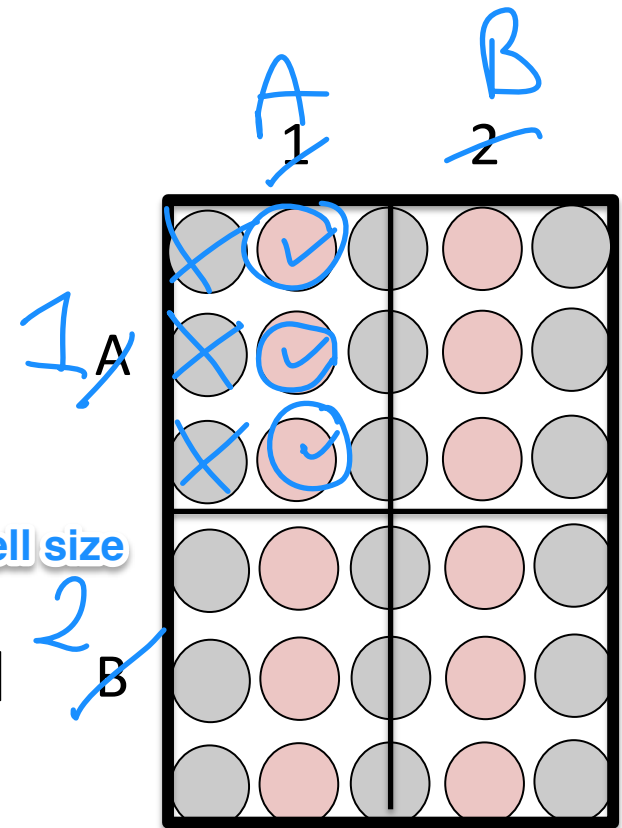
- Experiment 1 & 2

- 1: Cell number per macrowell

- SybrGold (# cells per microwell), cell size and well size**

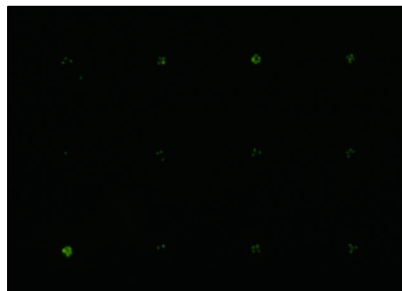
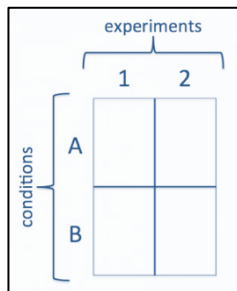
- 2: Cell loading time in macrowell

- estimate time needed for cells to settle**

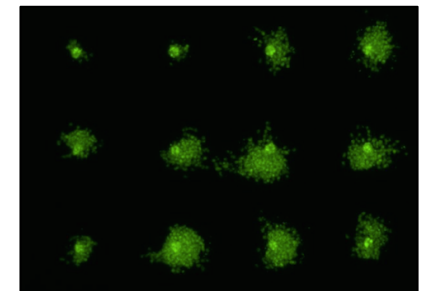
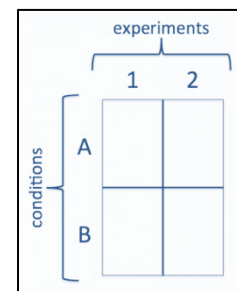


- Experiment 3: Cell Doubling

in main lab (T=0 days)

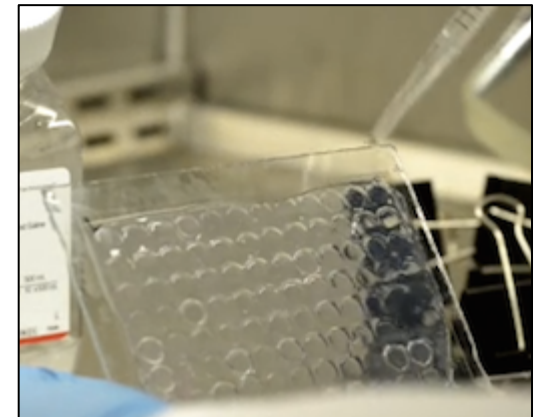
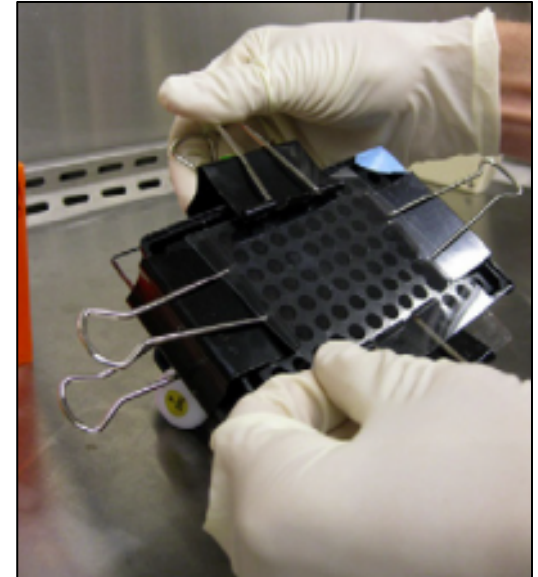


in TC room (T=4 days)



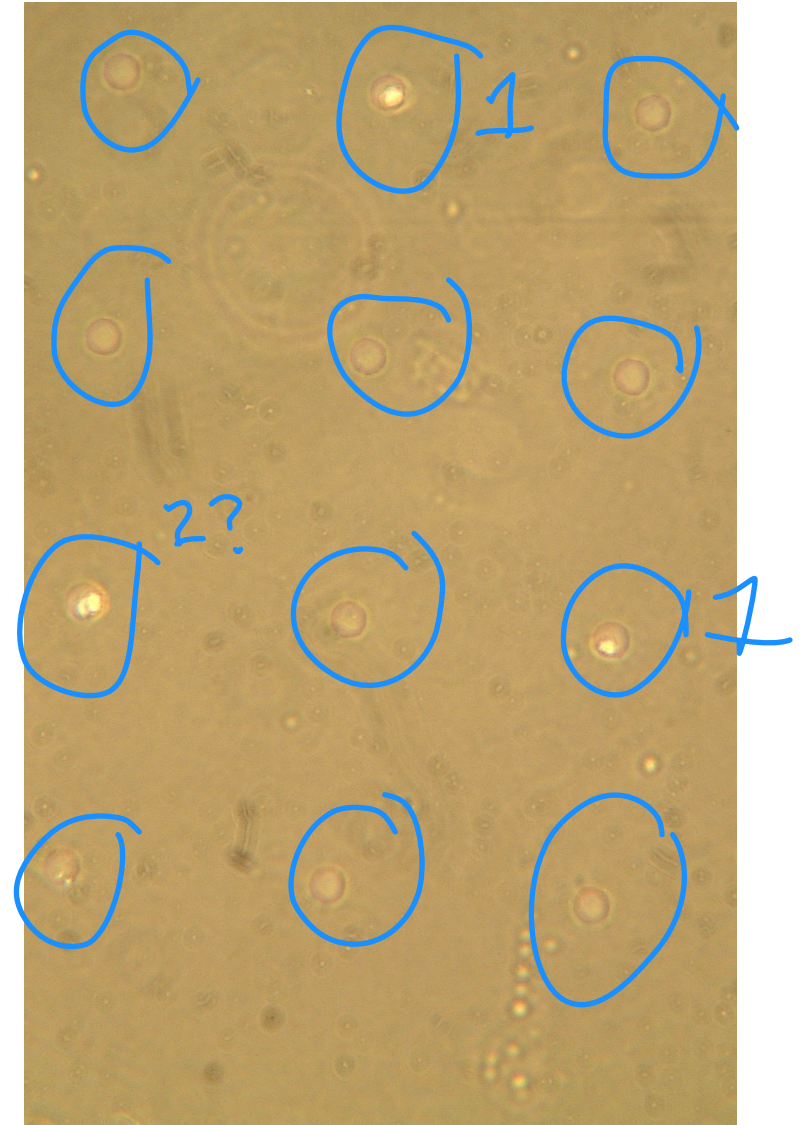
## Critical steps:

- Cell loading
  - line up the macrowells very carefully within the AB12 pattern
  - think timing: how long will loading be in B1? in B2?
- Washing
  - not too much!
- 0.3% LMP agarose gels *slowly*
  - dispense it drop-by-drop
  - leave it undisturbed for 15 min (no lid)
  - check that it doesn't dry up



# Homework M1D3 and analysis for M1D4

- Make a *figure & caption*
  - You will receive images today/tomorrow for T=0 chip via email
  - All figures **must include a title and a caption.**
  - Title: **Take home message**
  - Caption: **describe the image only**
- Receive homework credit for visiting Comm. Lab before M1D5!
- Which loading parameters are ideal?
  - A1, A2, B1, or B2? *Keep this info in your lab notebook.*



## Today in lab:

1. Carefully consider your design parameters and check with an instructor before starting your experiments.
  2. Each group send one person into tissue culture room to retrieve cells.
  3. One team member will complete D=4 (sterile) chip in the TC hood and the other team member(s) will complete D=0 in the main lab.
  4. If time allows you should take images of your D=0 chip before leaving today.
- Watch Engleward lab JOVE video during downtime
  - Reminder lab quiz at 1:05 (Tuesday) M1D3
  - TC labels should include: Team color(TR), date, your names, cell line name