

M1D6: Lipofection

10/2/15

- ✓ 1. Load diagnostic digests
2. Pre-lab discussion
 - Mod1 Major Assignment (the end is near)
 - M1D5 HW follow up
 - Paper discussion moved to Wed. (10/7)
3. ½ to tissue culture, ½ statistics exercise

Mod 1 major assignment details

- DNA engineering summary
 - Due Tue., Oct. 13 at 5pm on Stellar
 - Carefully read the assignment description
 - Additional office hours will posted next week
- DNA mini-presentation
 - Due Sat., Oct. 17 at 5p on MIT TechTV
 - Outline this talk with Homework due M1D7

“A few summers ago I had a job working in a marine biology lab. It turns out I don't like marine biology that much, but one thing that stuck with me about the experience was a phrase that the guy I was working under always said about long-term projects. ‘However long you think it's going to take, double it and add two.’ There has never been a truer, more universal statement. Human beings are amazing at overestimating their own competence. Whether it's how long an group meeting will take, or how many hours you will spend studying for an exam, or how many months it will take to finish your UROP project, or how much time you need to finish your Mod2 report, however long you think it's going to take: double it and add two.”-Former 20.109er via our class blog

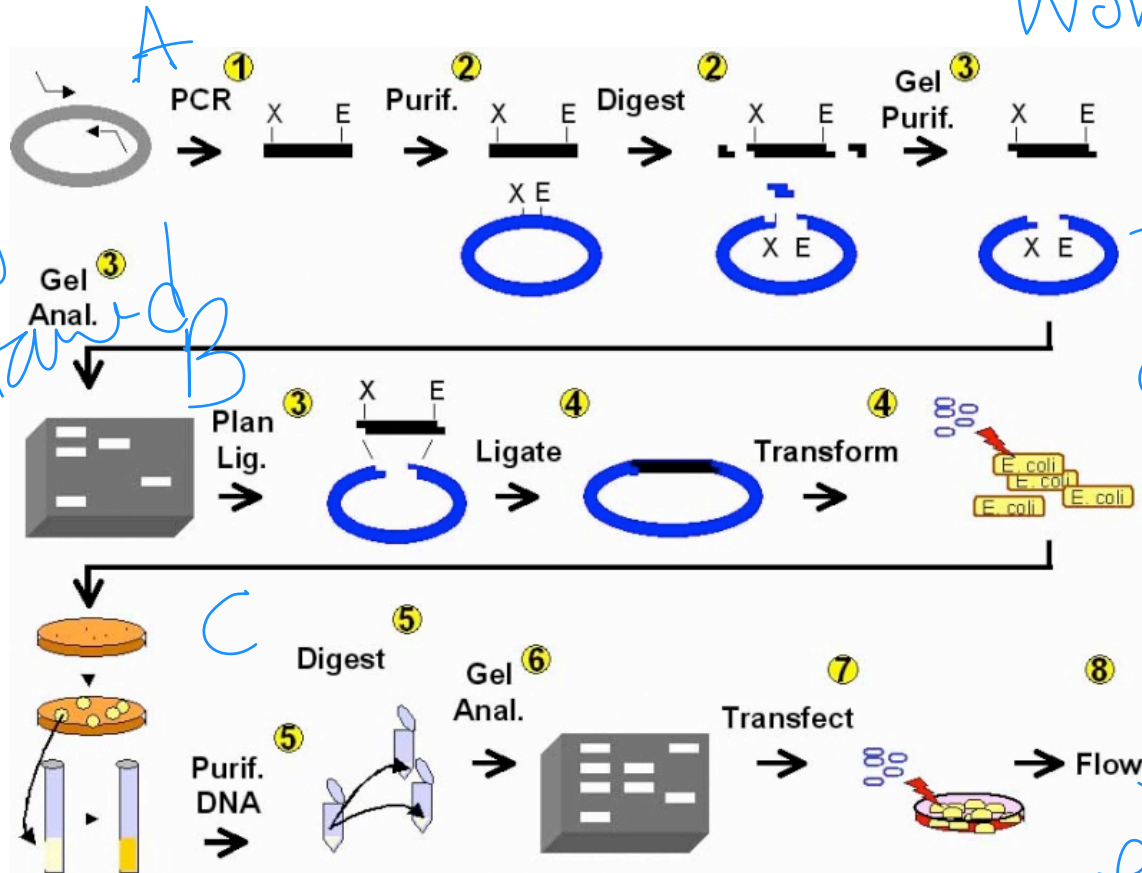


Mod1 Schematic Overview

Good, easy to follow
#'s easy reference
accurate

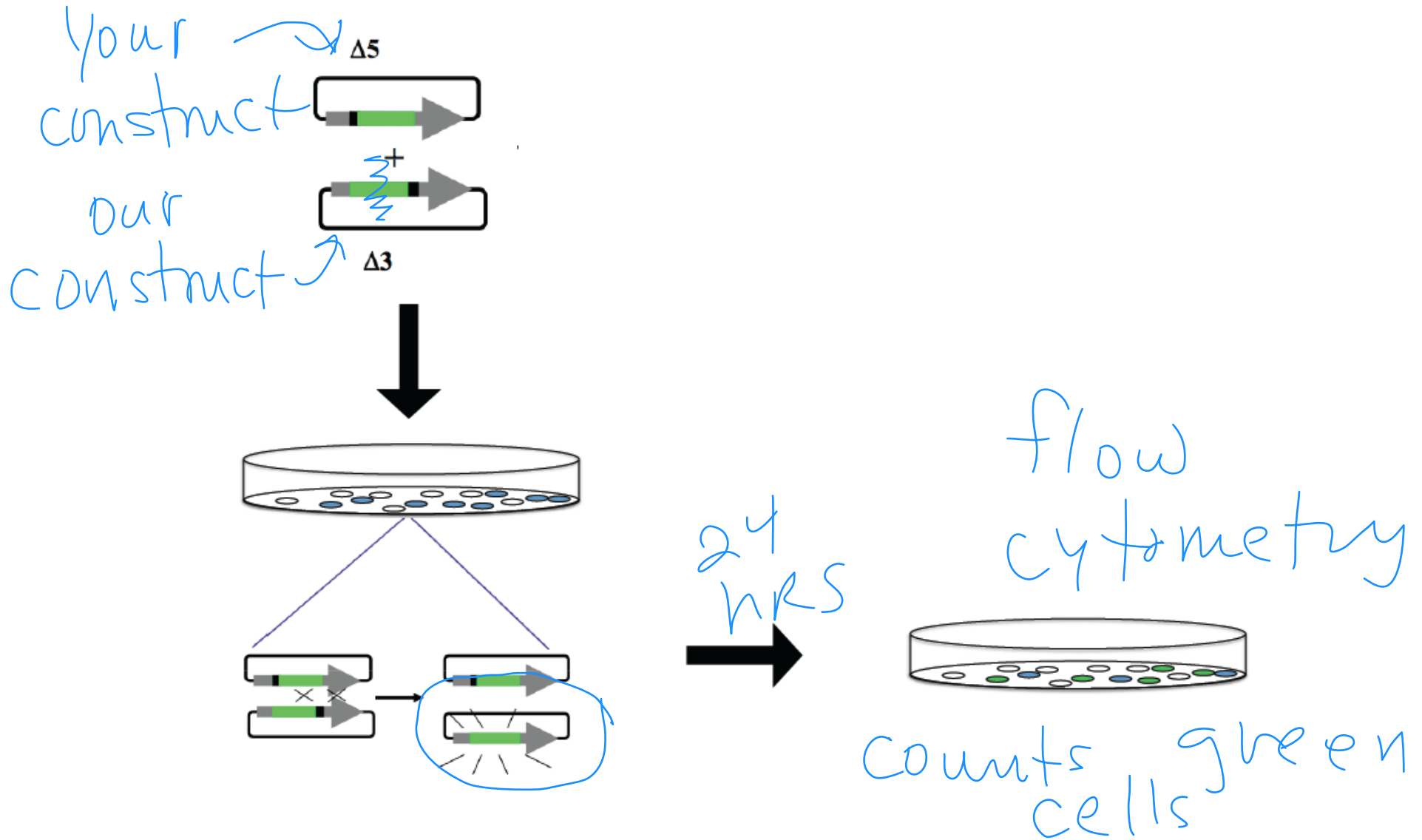
Polished;
- cluttered,
repetitive
- wordy

What is necessary
to understand
goals?

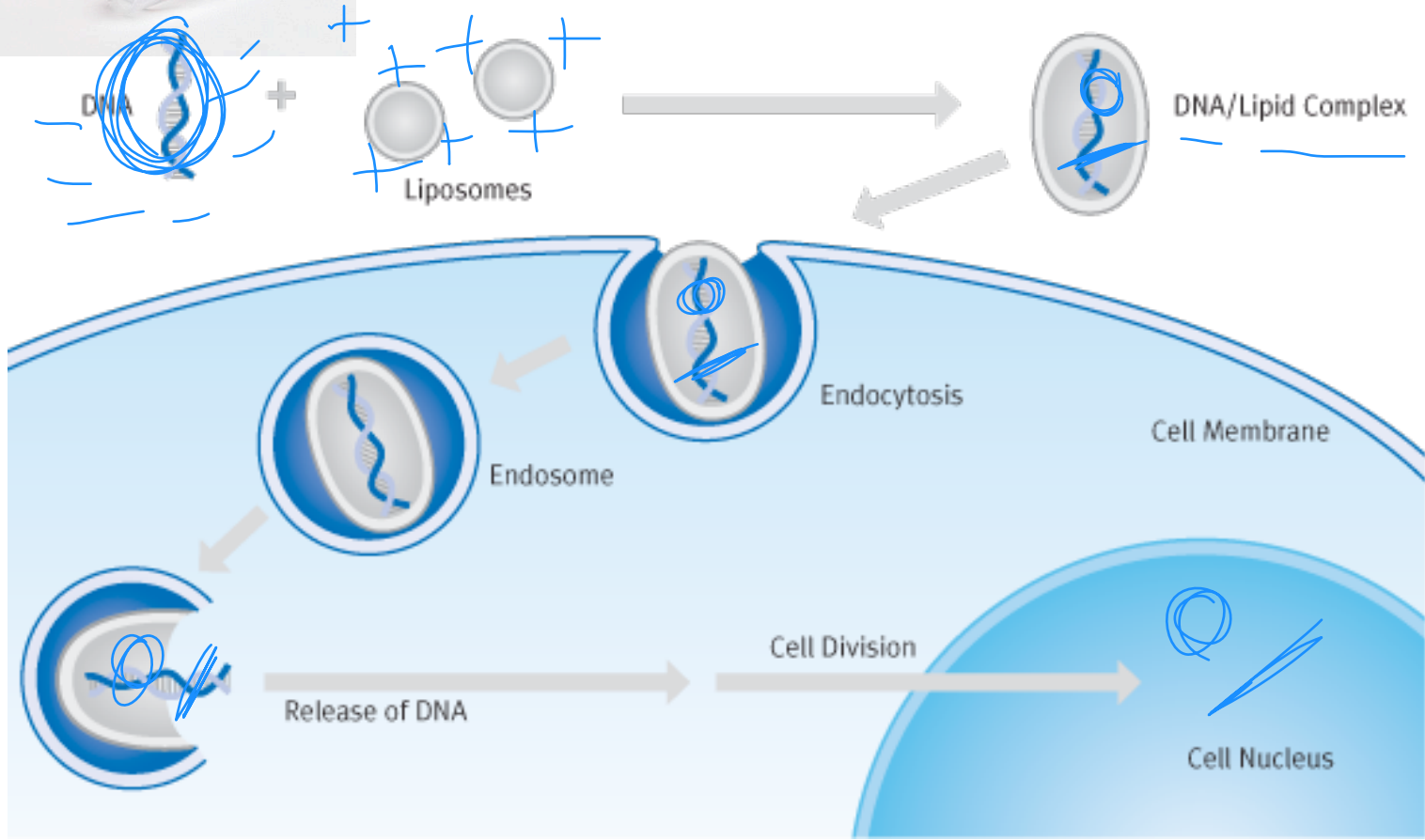


Title +
caption =
summarize
goal of
schematic/
expt

Building an HR sensor

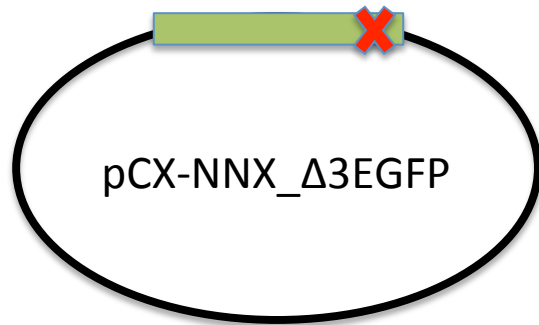
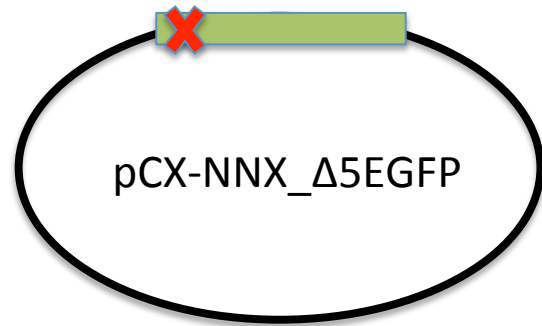


Lipofection




Designing your experiment


What is your hypothesis?



① Ratios $\Delta 5 : \Delta 3$ (cut or uncut)
start @ 1:1
choose up to 1:5

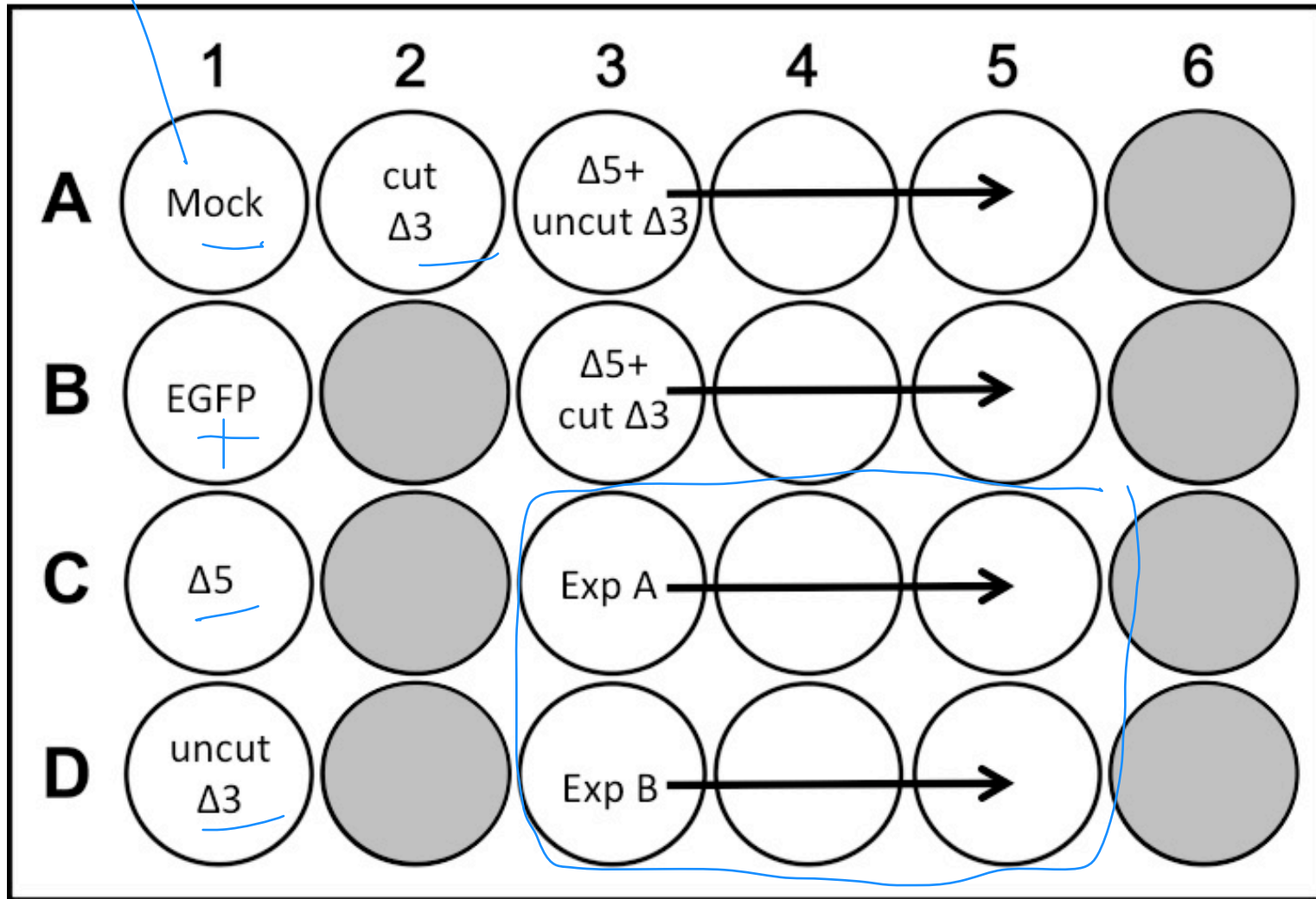
② double stranded break topology

BamHI  sticky overhang

PmeI  blunt

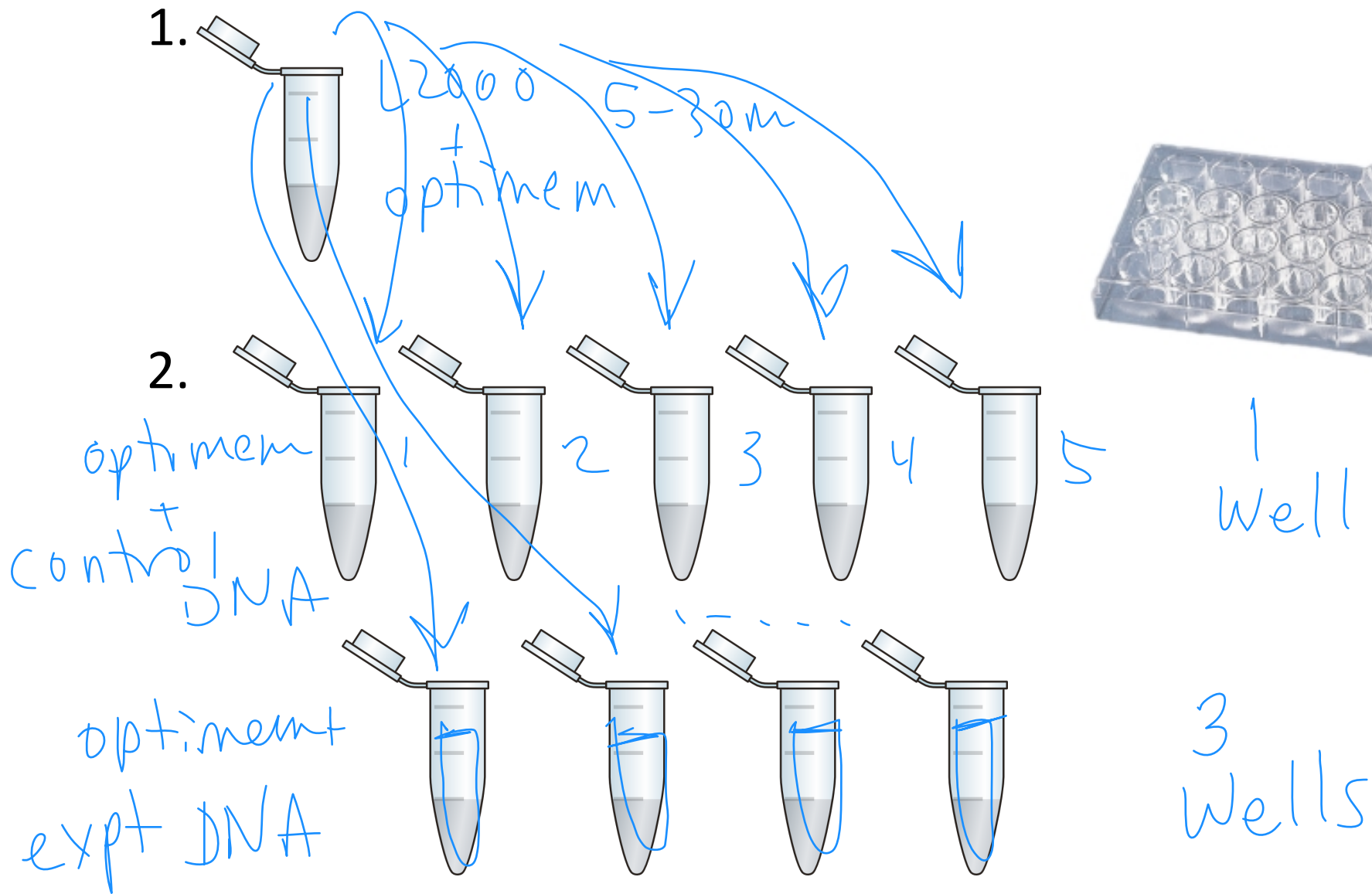
Your experimental setup

no DNA



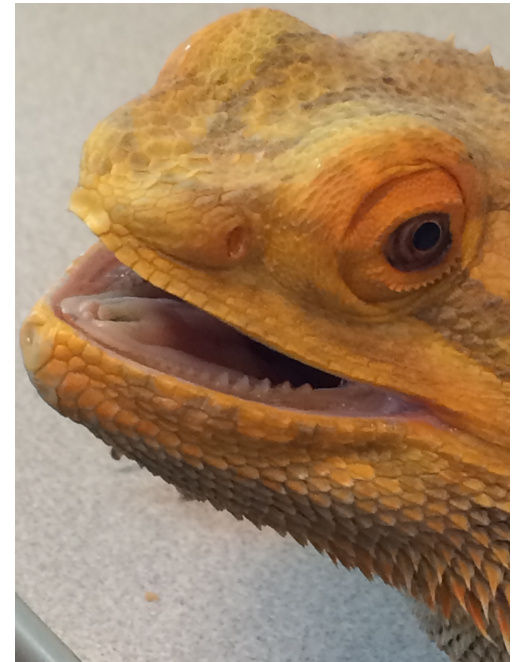
1:1
1:1
choose 1
cut

Procedural details



Reminders:

1. Next time: Lab Treat! and paper discussion
2. Email me redraft of Results/Discussion section (M1D4 HW) Oct. 3 at 5pm for additional comments and points.
3. Come to office hours for clarification and feedback!



Today:

1. Pick your conditions and calculate volumes for lipofections BEFORE you start TC. Write this out clearly for easy reference.
2. Be mindful of your sterile technique. The media does not have antibiotics!
3. Good day to catch up on lab notebook and ask for feedback.