

- Introductions - find a partner and a station
- 20.109 Philosophy - cubbies across from here
- Day-to-Day Workflow - } for your stuff
handouts
- Semester-Long Workflow up front
- Lab Safety
- Self-/Guided Lab Tour

20.109: Promises and Expectations

authentic investigation
constructive feedback

deep attention
support your peers



this is a collaboration b/w us all

Day-to-day workflow

- Hand in current HW, get old HW back
- Announcements and/or HW discussion
- Quiz 1:10 sharp 2-3 Q 5-10'
- Pre-lab lecture
- Lab work
 - See wiki
- Hand in notebook pages before leaving

From protocol to lab notebook

1. Begin by adding the correct amount of water to a 200 μ L PCR tube. Add that amount +1 μ L to a second PCR tube.
2. Next add the primers to each reaction. Be sure to change tips between additions.
3. Next add template to the first reaction tube.
4. Finally add PCR Master Mix to each tube, pipetting up and down to mix. Leave your tubes on ice until the entire class

Statement of purpose: Today we will design primers to delete 32 bp from the 5' end of GFP and flank the sequence with new restriction sites. Then we will prepare truncated GFP by PCR as an insert for later cloning.

Design primers for GFP insert (M1D1 Part 1)

See attached Word document.

PCR to make GFP insert (M1D1 Part 2)

Added 27 μ L H₂O to expt'l, 28 μ L H₂O to control sample.

Added [1 μ L] primer and [20 μ L] Master Mix (last) to both samples, and 1 μ L template to expt'l only!

Rxn ready at 3 pm \rightarrow on ice \rightarrow thermal cycler started at 4 pm.

Semester-long workflow

- Work in pairs
- Broader community collaboration
- Assessments
 - Minor: HW, quizzes, notebooks, participation
 - Major: reports and presentations *20109.talk@gmail.com*
 - **Ask if something is unclear**
 - Available over email, occasional **OH** *a few days before reports 16-319*
 - **Plan ahead and manage your time** *16-736*

Lab Safety

- Protection: gloves, glasses, coat ** clothing*
- Just in case... eyewashes, shower
- Hazards: *materials* / *chemical* / *biological* *splash/irritant*
- Waste disposal

sharps bin



biohazard barrels



- *bio and non-bio*
- *broad definition*
- *no solids or liquids*

- *non sharp*
- *biol. waste*
- *Solids o.k.*

bio. liquids → bleached, sink *chem. liquids → hood*

Time for demo and tour!