

**Welcome** to the Geng lab at UC Davis! We're glad that you have joined the lab and we want your experience to be a good one.

This lab manual borrows heavily from those of others (Drs. Fernanda Ferreira, Mariam Aly, Lisa Oakes, John Henderson, and others), but is under constant development. Your feedback is very welcome. Please send me (Joy) your questions, comments, and/or suggestions.

Everyone that joins the lab is expected to abide by the principles described within this manual.

## Lab member expectations and responsibilities

### Everyone

#### *Big picture*

Work in the lab should be fun, but also frequently hard. We all have to do things to maintain an environment that we enjoy being a part of and to produce the best science we are capable of.

- Do work that you are proud of. Do work that others will care about. Think about what your work means and try to articulate why it is interesting and important to you, and why it and should be important to others.
- Double-check your work. Being careful is essential to good science. Remember that the results can never be better than the quality of the raw data. If you are collecting data, you are the gatekeeper of all of our work. What you see and do is essential to our success. Make sure you understand why and what you are doing. Work independently when you can, try to solve problems, but never hesitate to ask for help when you need it. If you don't understand something, then ask!
- If you make a mistake, it's ok. Just make sure you tell your team about it right away.
- Be supportive of everyone in the lab. We are a team. This means sharing your knowledge, helping out when you can even if you are not on the project. Sometimes this means helping with code, or troubleshooting during an experiment. Sometimes this means reading drafts of articles or providing thoughtful feedback during experiment development. Science should always be collaborative and not competitive. Help and expect to be helped.
- Treat all subjects with respect and courtesy. This means you must be on time, behave professionally, be clear in your instructions.
- Respect each other's strengths, weaknesses, differences, and beliefs.
- If you are struggling in any way, tell someone. The lab is a safe place to ask for help and share. Your health and happiness are important to us.
- Communicate openly and respectfully with other members of the lab. If there are problems, try to discuss them with each other, but also let me know (Joy). The lab should be a comfortable place for everyone.
- Remember that your work impacts us all. We take our work extremely seriously and your contribution and success is an essential part of all of our successes.

### *Small picture*

- Do not come into the lab if you are sick. Stay home and get healthy, and don't risk getting others sick. Let others know right away if you have subjects so that they can be rescheduled as soon as possible.
- You aren't expected to work after hours and on the weekend. You are expected to get your work done and to do it with care. Find the hours and place that work best for you and help others on your team understand your schedule.
- Respect the schedules that others have set for themselves; expect others to respect yours.
- Show up to your meetings, experiments, and lab meetings on time. You do not have to be from 9am – 5pm everyday but show up for your commitments and try to be around the lab during core hours to interact with, help, mentor, and benefit from discussions with others in the lab.
- Notify me and your team if you will be out, due to either illness or vacation.
- Close the doors to the lab and testing rooms if no one else is around, even if you're stepping out for a minute.
- Keep the lab tidy. Food mess should be cleaned up promptly and the common areas should be kept free of clutter. Put away lab equipment and clean/ tidy up the testing room whenever it needs it.
- Arrive to lab at least 15 minutes before you have any experiments scheduled, so that you will have time to set up and be there to greet the participants.

### Principal Investigator

In addition to the above, I will also:

- Support you academically and personally to prepare you for the next step of your career or education to the best of my ability.
- Give you feedback on a timely basis for project ideas, poster or talk presentations, manuscripts, figures, grants, etc.
- Be available to discuss your research, or anything else.
- Create regularly scheduled one-on-one meetings with each person in the lab.
- Apply for funding to maintain and support the lab and individuals in the lab.

### Post-Docs

In addition to the above, also:

- Work to develop your own line of independent research.
- Apply for funding after the first year or two.
- Help train and mentor undergraduate and graduate students in the lab. Make sure undergraduates working directly with you understand their work and the goals of the research. Foster their creativity and curiosity by discussing research ideas and goals.
- Share your unique expertise with the lab and create a vibrant environment by engaging in intellectual argumentation in a respectful way.

### Graduate Students

In addition to the above, also

- Develop your dissertation research. Your dissertation should have at least three papers worth of material in it that addresses a big-picture question.
- Develop your own ideas and experiments, but remember that the lab is there to help. All final experiments should be vetted by the PI and at least one other independent post-doc or student. The experimental design should be fully articulated and documented before the first subject is run.
- Help mentor undergraduates, especially the ones working directly to with you. This means training them on skills to run experiments, teaching them about the research topic, engaging their creativity and curiosity by bringing them into the research design and analyses.
- Present your work and apply for grants that are applicable.
- Make sure you meet all departmental deadlines, and remind Joy of what they are!
- Talk with Joy about what your long-term goals are so that we can prepare accordingly.

### Undergraduate Students

In addition to the above, also

- Work with other lab members on data collection and analysis.
- Develop your weekly schedule by talking with your graduate student or post-doc mentor. You should be coming in regularly and scheduling enough time to become an expert at your tasks.
- If you are earning course credit for research, you must also attend lab meetings when your schedule permits and present at one of these lab meetings.
- Be engaged! If you find yourself losing interest in the work you are doing, or want to try something different, talk to your mentor and Joy. We will help you find the best place for you, even if it is not in our lab.
- If you feel that your personality or goals are poorly aligned with your graduate student or postdoc mentor, but you like the work in the lab, feel free to discuss this with Joy or other graduate student and postdocs in the lab. Know that doing so will lead to an open discussion of which projects might be a better fit. Switching projects within the lab is absolutely fine.
- You must complete CITI Training before engaging with subjects.

### **Code of Conduct**

The lab follows the Code of Conduct policies and Principles of Community as a part of the University of California Davis.

The lab is committed to ensuring a safe, friendly, and accepting environment for everybody. If you know of behavior that violates our principles, reach out to the PI, department chair, or appropriate university official immediately.

Our lab is committed to ensuring research integrity. We will not tolerate fabrication, falsification, or plagiarism. Do not engage in any activity that may compromise the integrity of the data, analyses, or conclusions drawn. If you are concerned that something you are doing could be misconduct, speak to Joy and other lab members before continuing.

## Authorship

Anyone who made a significant contribution to the work will be included as an author on the paper. Significance is defined as including substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; and drafting the work or revising it critically for important intellectual content<sup>1</sup>, see also <sup>2</sup>.

<sup>1</sup>Resnik, D. B., Tyler, A. M., Black, J. R., & Kissling, G. (2016). Authorship policies of scientific journals. *J Med Ethics*, 42(3), 199-202. doi:10.1136/medethics-2015-103171

<sup>2</sup>[https://oir.nih.gov/sites/default/files/uploads/sourcebook/documents/ethical\\_conduct/guidelines-authorship\\_contributions.pdf](https://oir.nih.gov/sites/default/files/uploads/sourcebook/documents/ethical_conduct/guidelines-authorship_contributions.pdf)

At the start of a new project, the student or post-doc taking on the lead role can expect to be first author (talk to Joy about it if you aren't sure). Joy will typically be the last author unless another senior author is involved. Students and post-docs who help over the course of the project may be added to the author list depending on their contribution, and their placement will be discussed with all parties involved in the paper. If a student or post-doc takes on a project but subsequently hands it off to another student or post-doc, they will most likely lose first-authorship to that student or post-doc, unless co-first-authorship is appropriate. All of these issues will be discussed openly, and you should feel free to bring them up if you are not sure of your authorship status or want to challenge it.

## Lab Resources

We do a lot of communication over Slack through [ucdavis.slack.com](https://ucdavis.slack.com).

Some institutional knowledge can be found our Github page (<https://github.com/genglab/institutional-knowledge/wiki>)

## University Resources

Harassment & Discrimination Assistance and Prevention Program, <https://hdapp.ucdavis.edu/>

Center for Advocacy, Resources and Education (<https://care.ucdavis.edu/get-help>)

Student Health and Counseling Services, <https://shcs.ucdavis.edu/>

Aggie Compass Basic Needs Center, <https://aggiecompass.ucdavis.edu/mental-wellness>

## Other Professional Resources

National Mentoring Network, [www.nrmnet.net](http://www.nrmnet.net)