



Lab Handbook (updated Jan 13, 2024)

Inspired by Mariam Aly lab manual.

General points

1. **Be an adult. Show up when you are expected. Be accountable. Do your job well.**
2. We all make mistakes. Own up to it. Learn from it. Do not cover up your mistakes. This affects all of us and the advancement of the field. A day or a week lost due to your error is not a big deal in the large scheme of things.
3. If you have a problem, discuss it with Raji or the person directly. We **do not gossip** in this lab, especially about our peers.
4. We work as a **team**. Projects assigned to each individual are your responsibility. You are encouraged to recruit others to work on your project. You will discuss authorship parameters and inform me. If there are conflicts, resolution will depend on contribution to the projects.
5. Raji **does not micromanage**. You are hired to do your job. You will ask Raji if there are questions or concerns. Everyone is expected to share their work progress during weekly lab meetings. A template of what is expected during lab meetings is online.
6. You are not expected to be friends with the others in the lab (although it would greatly help the morale if you were). You are expected to **be professional** in your behavior at all times.
7. We are an **inclusive lab**. Think before you ask a personal question. There is no room for intolerance, bigotry, racism, or sexism in this lab. If someone chooses not to share their private information with you, please respect that decision.

Lab specifics

8. Data should be treated with respect. It is unacceptable to make up data, adjust data points to obtain significance, or exclude data that does not “make sense.” It is up to us to make sense of the data and not vice versa. **Research misconduct will result in your termination from the lab.**
9. Every experiment is expected to be carried out by at least two lab members at least three times before we conclude the findings. This does not mean the team or Raji does not “trust your work.” Any work that comes out of our lab must be reproducible, and this starts in the lab.

10. We use an electronic lab book. You should update the e-lab book at least once a week. Raji should always be able to access the raw data and your interpretations of the data remotely.
11. Your space should be tidy and organized. Do not leave messes behind for others to clean up. Wash your dishes and dispose of your trash before leaving the lab daily.
12. The lab inventory is online. Raji can show you how to access this. If you use the last of any reagent, you must inform the other lab members promptly. Experiments will be stalled if the reagent lists are not updated.
13. Take initiative. If there are things that need to be done, please do it. Do not wait to be asked.
14. There are daily tasks assigned to all lab members. This list is available in the lab. You are expected to take care of the tasks assigned to you without any reminders.
15. Life happens. You are not expected to show up to work when unwell – emotionally or physically. However, you should communicate any changes in experiment plans with Raji.
16. Raji cannot know things that you do not tell her. If you are facing emotional or physical crisis, you should communicate so that Raji can make alternate plans to complete your assigned work.
17. You must take vacations and celebrate with your friends and family. Science should be a priority, but no one is expected to give up living their life. You must discuss any vacation time with Raji over email and add it to the lab calendar. If you will be out of town or taking more than one week off, please inform Raji at least two months in advance.
18. The quantity of time in the lab does not equal quality. All are expected to spend quality time in the lab. You must be present during regular working hours (9 am to 5 pm) during your first few months. You can manage your time once you have a handle on your experiments and require minimal supervision. *Please be aware that progress in your work requires you to spend time in the lab.*
19. When you are at the bench or analyzing data, you must not have any distractions in front of you. These include but are not limited to online streaming of shows, messaging apps, etc. Headphones or Air pods to listen to music are acceptable if they help you and not distract you from your work.

What can you expect from Raji?

1. Assign a project for you and explain the science behind the work and the hypothesis.
2. Be available to meet with you and discuss any challenges that you face in the lab or outside.
3. Prioritize the human over science. Your wellness takes precedence over science.

4. Treat you respectfully, articulate concerns over your behaviors, and provide tangible improvement methods.
5. Provide credit for the work that you completed.
6. Be open about lab finances and the outcome of grants.
7. Provide you with the resources to succeed. Help you network, make introductions at conferences, and write letters of recommendation so you can move on to the next career stage.
8. Take criticism constructively and not retaliate.

Expectations from post-docs

Follow the general and lab-specific requirements and the following -

1. Raji does not expect post-docs to stay in the lab beyond four years from their start date. You are expected to have an exit plan in place, communicate this clearly with Raji, and work toward achieving your goals early on.
2. Raji hires post-docs only if she can support them for a year. Within a year, you are expected to write and submit your grants to obtain funding to support yourself. Although not everyone has academic ambitions, Raji strongly believes that grant writing skills will help in any scientific career path you choose. Raji can help identify funding sources and develop ideas. But she cannot come up with ideas for you. **DO NOT PLAGIARIZE!**
3. You are expected to contribute to the projects that are assigned to you by Raji.
4. You are expected to be competent in mouse work, cell culture, and basic molecular biology techniques.
5. You should work with minimal supervision.
6. You should be able to draft manuscripts and write grants coherently. Raji expects to edit your work and make stylistic changes, but she cannot be expected to do more than that.
7. You must be able to read papers, think independently, design experiments, troubleshoot, and complete your projects promptly.
8. You should be able to set deadlines for your goals, achieve them, and keep Raji updated along the process. Your goals may be grants, manuscripts, completing a figure for a manuscript, or completing an experiment.
9. We are a new lab. We set deadlines for project completion as a team. If you cannot complete a project, a writing assignment, etc., by the time Raji expects it, you must provide advance notice of your challenges and ask Raji's help. Please do not wait until the deadline to inform Raji that you cannot complete the task.

10. Support graduate students. While you are not expected to mentor students, you can support and encourage the students and help them troubleshoot their work.

Expectations from graduate students

Follow the general and lab-specific requirements and the following -

1. The most essential characteristic that Raji seeks in a graduate student is their willingness to learn and adjust.
2. Science can be thrilling occasionally, but more often than not, it is exhausting. Persevering during setbacks and persisting will help you advance in graduate school.
3. A hypothesis is just that – it is a hypothesis. Your experiments to test a hypothesis may or may not work. As long as you can convince the team and Raji that there were no technical glitches involved, we can move on. Do not take the failure of an experiment as a personal failure.
4. Anytime you are taught a technique or watching someone perform an experiment, you must take notes. You might think you would remember the details, but you won't unless you write things down.
5. After observing a technique three times, you are expected to do it with minimal supervision while taking notes of exactly what you did.
6. You are expected to read papers and ask questions about things you do not understand. Raji will share a folder that contains articles that will introduce you to the work that we do. These papers are carefully curated so you can get a broad idea of our pursuits. These are not a substitute for your curiosity. Read, read, and read more.
7. Raji does not expect graduate students to design their projects. You are expected to design experiments to test a hypothesis, optimize the conditions, conduct experiments, analyze the data, and interpret your results. Raji and the other lab members will be happy to help you if needed.
8. Scientific writing is a skill that can be learned. You are expected to write drafts of all your papers. While Raji does not expect graduate students to write like seasoned scientists, please notice Raji's changes in your drafts. **DO NOT PLAGIARIZE!** If you do not know what this means, please ask.
9. Raji highly recommends that graduate students write grants. It does not matter how much money you can get; the grant writing experience is invaluable.
10. You should learn time management and multi-tasking skills in graduate school. The lab meeting template will help you set attainable tasks for each working day and keep you accountable.

11. Follow the departmental expectations. This includes but is not limited to TA-ing, classes, seminar attendance, giving talks, etc.