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MARDER LAB EXPECTATIONS AND ROLES

This document is intended to lay out in broad terms the expectations for members of the Marder lab. It will be revised from time to time and should be viewed as a living document.

Overview: The Marder laboratory has the dual roles of conducting original research and training the next generations. As such, is it important to remember that we all start out as students who are "consumers of knowledge", and who are drawn to science because of its intrinsic interest and/or utility. At some point, a fraction of science students transition to becoming scientists, whose job it is to "create new knowledge". Some students make this transition easily, some with difficulty, and some discover that while they enjoy learning what others have found, the path to scientific discovery is slow, and often frustrating. These individuals often prefer careers that allow them to use their science interests and abilities in other ways. Therefore, we recognize that not all individuals who join the laboratory will eventually become scientists, but we hope to create an environment that allows novice scientists to develop the skills, expertise, and mindset that will foster their development as scientists or help them move in other directions.

Specifics will be found below. General principles:

a) All lab members are expected to "pitch in" when necessary to contribute to general lab running, cleanliness, etc.
b) All lab members are expected to scrupulously maintain lab notebooks and to store and archive their data so that they and others can access it in the future. Notebooks must contain enough detail that someone else can find and interpret the data in 5 or more years.
c) All lab members must be willing and ready to help others and to teach lab procedures when appropriate.
d) All lab members must respect the workspace and work time of others.
e) All lab members must strive to ask for help when necessary but attempt to solve problems themselves in the first instance. The

balance between asking for help and figuring things out for yourself is hard to learn, but this is a very important part of becoming a scientist.

f) All lab members will attend and participate in weekly lab meetings.
g) All lab members will comply with Brandeis University ethics and safety regulations at all times.
h) All presentations of lab research to the outside world, either on campus or elsewhere, should be discussed with Eve ahead of time, and should be rehearsed ahead of time with the Marder lab community, either in entirety, or with a designated smaller group. All slides for talks and posters should be designed for clarity.
i) All lab members should put their planned out-of-lab and travel times on the whiteboard in Eve's office.
j) If you are sick, stay home. Covid taught us that it is possible to keep cold and flu from spreading to everyone in the lab. If you have a cold, and are coughing and sneezing, please wear a mask, and keep your distance. And check to make sure you don't have Covid if you have symptoms.
k) All lab members should make brief summaries of all of their results and paste these into the HISTORICAL PAPER LAB SUMMARY BOOKS. As always, experiments are identified by notebook number and page number.

<u>Guidance for undergrads</u>:

Opportunities for undergraduates come in two forms:

a) Paid workers who may not wish to eventually conduct independent research. Students who are being paid for lab duties must keep to a schedule set by the Lab Manager, and inform the Lab Manager promptly if there is any reason that they can't meet their obligations.
b) Students who start out being paid to help out with routine laboratory tasks, and who wish to assume greater responsibility and independence and to eventually do a senior thesis. Students must keep to a schedule, either set by the Lab Manager and/or their mentor(s), and inform the Lab Manager and their mentors if there is any reason they can't meet their obligations.

All research students should be aware that the university does not allow us to pay an hourly wage to a student for the time they are doing research if they are receiving academic credit for that research (e.g. Neur 99). If you are a senior and wish to continue to earn money for lab work you may do so for routine lab tasks such as cleaning tanks, etc.

All research students should apply for funding for travel and summer support, if relevant, and not miss those deadlines. It is your responsibility to determine what opportunities are available to you.

If you wish to do a Senior Thesis, it is your responsibility to meet all appropriate deadlines and follow the relevant procedures. It is expected that thesis students will work at least 15 hrs/week during the academic year and also do some work over school vacations and breaks.

Note: the best Senior Theses are those in which students take ownership of their work and semi-independently develop their own projects. Recent examples were theses of Toly Rinberg, Dahlia Kushinsky, and Lily He, all of which resulted in the students publishing first-author papers. Commonly, these students spend at least 2 or more years in the lab, as students who join the lab later in their careers are less likely to reach the same level of independence and expertise. Nonetheless, many outstanding theses were done by students who joined the lab in their junior year, including several that received the highest honors. In all cases, the best theses are those in which the students took initiative in the formulation and execution of their work, although it always should make sense and be a research direction relevant to the lab's work. Undergraduate students usually have a postdoc or Ph.D. student mentor, but this is not universally the case.

Undergraduate research students are encouraged to attend at least one scientific meeting, at lab expense (if funds are available) if they can do so without a serious negative impact on their coursework. All such plans must be approved by Eve.

<u>Guidance for Ph.D. students</u>:

It is assumed that Ph.D. students will eventually develop and conduct their own project, either independently or collaboratively. In both instances, Ph.D. students should take ownership of their work, and learn to balance

their other duties (courses, TAships, qualifying exams, fellowship applications) with progress in the lab. Progress will be monitored by the student's home program and by yearly IDPs (Individual Development Plans) in the lab.

Ph.D. students are expected to attempt to become expert in the literature relevant to their projects.

In addition to developing and carrying out a thesis project, it is important that Ph.D. students develop the ability to give outstanding presentations of their work, as well as improve their ability to write manuscripts for publication.

The generic expectation is that Ph.D. students will earn their degrees with 2 first-author publications or their equivalent.

Ph.D. students should attend the Society for Neuroscience Annual Meeting each year, and may attend one or more additional meetings, upon specific request. These meetings should allow the student opportunities to meet prospective postdoctoral supervisors, etc.

Eligible Ph.D. students should apply for F31 predoctoral fellowships at the appropriate time.

<u>Guidance for full-time staff:</u>

In principle, your job description should describe what you are doing. If your job description is substantially different from what you are actually doing, please draft a revised job description so that we can update it.

Growth and personal development in a staff position can come in many forms, from gaining experience in administration and lab management to learning more science, to taking advantage of the university's policy on taking classes while an employee. Each staff member should consider their future career trajectory and attempt to gain appropriate skills while performing their job.

<u>Guidance for Postdocs</u>:

Postdocs are expected to carry out innovative scientific research, either independently or in collaboration with others. To that end, if a postdoc is switching fields by entering the Marder laboratory, in their first few months they should read a significant number of STG papers from the Marder lab and elsewhere. If they do not have strong training in neuroscience, they should take NBio 148 or NBio240 at the first opportunity, in addition to reading one of several good textbooks.

If a postdoc has unfinished manuscripts from their time as a Ph.D. student or from a prior postdoc, these should be completed as rapidly as possible. It is reasonable that 1 month of Marder lab work time is devoted to this. If this is not sufficient, it is the postdoc's responsibility to complete this work during nights and weekends. This is important, as the postdoc's record of productivity will be important for fellowship and job applications.

Being a postdoc is a full-time commitment. There will be times when it will be necessary to work long hours, either to meet a deadline, or because some experiments may so require. Good time management should help in this regard, but the best time management may still not solve the problem that some experiments may require long hours, and some deadlines may require long hours.

Postdocs are considered staff by the university, and you should therefore indicate on WorkDay when you take vacation, personal, or sick time. This is important, because if you leave the lab with 6 weeks of unused vacation days, the grant will have to pay for that time. Therefore, please be careful to claim your vacation, personal, and sick days. If you attend a meeting for the lab, the travel and meeting days are legitimate work days, but if you take additional days for tourism, to visit family, etc., please claim them as vacation days.

All postdocs should complete an IDP at 6-month intervals. This is important to keep track of progress, changes in research direction, and changes in career expectations and plans. The last is particularly important, as it may require rethinking how the individual postdoc spends their time to prepare for a suitable next position.

Postdocs are expected to take the initiative to write first drafts of manuscripts, do appropriate data analysis, and create figures for publication.

Postdocs are encouraged to attend summer schools, either as students or TAs as part of their professional development.

All postdocs should apply for whatever fellowships are available to them, both for the financial support and the experience in writing grants. It is the postdoc's responsibility to inform themselves of the relevant opportunities.

PI responsibilities:

Oversight of the entire lab and its progress is the PI's responsibility. This includes writing grants and progress reports, working on all manuscripts, and giving advice and direction on all research projects.

The PI is ultimately responsible for decisions about collaborations, authorship, and for ensuring that any disagreements among lab members are dealt with fairly, assuming of course that these are brought to her attention.

All major financial decisions must be made by the PI, although decisions about modest purchases can be made by lab members on their own. All travel and vacation plans must be OK'd by the PI ahead of time.

The PI will provide letters of support and recommendation letters for all lab members for grants, courses, and future positions in a timely fashion. The PI will do her best to help lab members to find suitable future positions, whether these are graduate or professional schools, postdocs, or positions in industry, academia, or government.