**Bowles Lab Expectations**

The expectations and roles of students, postdocs, and advisors can sometimes be opaque. The following is to outline some of my expectations in the lab, with the key caveat being that every person is different and that my primary motivation is to support you as well as balancing the needs of the overall lab community.

**Lab Community**

It is very important that our lab engender a culture of generosity, respect, and robust scientific exchange. It is always important to have boundaries and not get overextended, but as much as possible, please help create a culture of generosity in the group. I hope this culture will also extend to your interactions with the larger community. It is an important investment to approach department support staff, etc. with respect, kindness, and humility. Treating departmental staff in such a way is not only the right thing to do, it will also pay off when you inevitably need something done quickly.

Please be present and engaged. We benefit from a job with a lot of flexibility. It is ok to work from home or a coffee shop sometimes, but I expect that you will work a majority of the time from the office and lab. We need a critical mass for our laboratory to thrive. You will learn a tremendous amount from repeated, casual conversations with your labmates, and some may turn into life-long friends and collaborators. Please also attend relevant departmental events and lab meetings. Berkeley is huge and you could spend your whole week just attending seminars. Pick a couple of communities that you would like to be a part of and invest in those (e.g. Berkeley Food Institute). Try to be fully present for the events and seminars you do attend.

I expect everyone to contribute in tangible ways to lab functioning. Lab members will have rotating "lab jobs" - please stay on top of your lab job and treat communal resources as if they were your own. It is important that lab duties be divided equitably. If you have a large sampling campaign and lots of samples will be coming into the lab, please communicate with other lab members. Clean up after yourself, and order new supplies or reagents when communal resources run out.

All lab members are expected to participate in person for regular lab meetings, unless you are traveling for a conference or busy with field work. These are opportunities to sort through administrative tasks and provide feedback on everyone’s work. If we are reading a draft manuscript to be discussed during a lab meeting, please allocate enough time prior to the meeting to provide thoughtful and constructive criticism and ideas.

All lab members will also be expected to pitch in during crucial “crunch times” during experiments and field campaigns. While this means allocating some of your time to others’ work, it also means that during select occasions you can rely on your lab mates to help out. This strategy increases the capacity of what the lab can do, helps us get to know each other, and helps us learn what everyone in the lab is doing.

**Independence**

I expect that most lab members will function with a high degree of independence, with the caveat that the degree of independence will increase the longer you are in the lab. This applies both to your broad intellectual explorations and also your day-to-day operations*.* Being independent means being *internally motivated and proactive in finding solutions to problems*. Get in the habitat of reading the primary literature in your field. In order to be successful in academia, one must have a broad understanding of the field and this is impossible without being engaged. This is also an important mechanism to understanding the broader implications of your work. It is easy to lose the forest through the trees when immersed in your own system but staying engaged in the broader literature will allow you to understand where your work fits in. Get in the habit of reading equipment/software manuals, immerse yourself in learning new skills, etc.

*But being independent does not mean being isolated!* Especially early on when you are exploring ideas, part of my job is to help ensure that exploration is wide enough to consider a range of possibilities and poke at the boundaries of knowledge, yet also directed enough to yield tangible progress toward defining exciting and testable research questions. I do expect your research questions to fall within or across the themes of the lab (see the lab website).

**Communication**

You can expect me to be highly committed to your development as a scholar and scientist. You can expect me to meet with you weekly or every other week, especially during your first couple of years in the program. I expect that you will come to these meeting prepared with questions, ideas, discussion topics, etc. My students and postdocs are my top professional priority and I enjoy investing time and energy to developing collaborative relationships with personnel in my lab.

Please communicate with me about your research progress and obstacles regularly. If I am not involved, I cannot help. Learning to set (and reach) reasonable goals on multiple time scales (weekly, semesterly, yearly, etc) will accelerate your progress. One excellent resource for this is the National Center for Faculty Development and Diversity (google it), which provides a number of strategies and tools for setting goals, aligning time with goals, and writing productivity. You can expect that I will ask you to set goals at regular intervals and will check in about progress toward those goals or barriers you encounter. If you tell me, or I observe, that progress is hindered, then I will take a more active role in helping to define short-term goals and ensuring that goals are met.

Please ask for help when you need it. I am available to discuss research ideas with you and help you troubleshoot your work at any time. During your time in graduate school, we will have many conversations about research decisions, career path, navigating collaborations, successes, frustrations, etc. Don’t be shy when there is something you want to discuss, no matter what the topic.

You can expect me to respond to your needs in a timely way. If you suspect that something has fallen off my radar, please don’t be shy about reminding me. Likewise, please respond to me in a timely fashion as well, even if it is to say, “I’ll get back to you about this.”

**Organization and research**

Part of staying organized is thinking ahead and planning for different eventualities. All research related files and data, including in-progress work, should be stored on the lab’s cloud folder on bDrive (or for more sensitive human data, on Box) and should never be moved off the cloud.

Organize your samples carefully with highly informative labels, be detailed with your research notes, etc. Also, be rigorous about lab and field safety, lab and field equipment, lab records, field notes etc.

Our lab has several pieces of equipment (plate readers, microscopes, drying ovens, etc) that may be of need to multiple lab members and collaborators. Be courteous about your use of this equipment and stay on top of scheduling time on these as well as inform lab members of estimates of future use. Everybody’s needs will be different and it is important that we all gather the best and most timely data possible. If conflicts arise, please include me in any discussions.

I expect that you will learn R and use it for your statistical analyses. R may have a higher initial learning curve than other statistical software packages, but it will pay off many times over. Also, I cannot help you if you do not use R.

**Funding**

I expect you to pursue external funding for your research. You should apply for grants and fellowships even in your first year. This will include both small grants (e.g., Organic Farming Research Foundation, Annie’s Fellowships) and large fellowships (e.g. NSF GRFP, Ford, Women in Science). In subsequent years, you should be keeping track of deadlines for other fellowships and grants geared toward Ph.D. candidates (e.g., USDA pre-doc fellowships). Be sure to allocate plenty of time for these applications. Some proposals must go through UC Berkeley’s Sponsored Projects Office, which requires materials 10 business days before the grant deadline. Last minute proposals are rarely successful.

You can expect me to help support your research when I have funding related to one of your projects. If I do not have funding directly related to your project, you can expect me to support your grantsmanship by assisting with proposal development and writing. I expect to see many drafts of grants with enough time to comment and assist you. For larger grants, at a minimum, I expect to see a full draft *at least* 3 weeks prior to the (internal or sponsor, whichever is first) deadline to allow for *at least* two rounds of comments. The more drafts I see, and the more drafts you work on, the more likely it is to get funded. For smaller grants, this deadline will be flexible but I expect a full draft 2 weeks prior to the deadline.

I will sometimes have funds that are flexible enough to use as "seed funding" for projects in the lab. So, even if you are working on something peripheral to my major grants, please talk to me about your funding needs. One of my major priorities is securing external funds for the lab and everyone’s projects.

You can expect me to contribute financially to professional development opportunities. I am happy to contribute a modest amount annually to offset travel expenses for a conference (if you are presenting) or courses (if it contributes directly to your training and no analog exists at UCB) if no other funding is available. Before asking for funding for this purpose, please do look into other options - our department and professional societies have travel grants for students to attend meetings.

In the ideal world your research should not require any personal expenditure, and I will work very hard with you to make sure finances do not become a strain. However, it is also common for early stage graduate students (particularly those working on totally independent projects) to not have a lot of research funding, and the lines between personal and professional resources can sometimes become blurry. We will work to minimize these costs and it is important that we discuss questions or concerns you have so finances do not become stressful.

As part of your funding package, I will provide a minimum of two semesters of a GSR. We will work together to establish the most appropriate timeline for this funding as needs come up. As a general rule, GSRs will be prioritized for heavy field work semesters after students have completed their qualifying exams.

**Publications**

It is in your best interest to publish your work in a timely fashion. The currency in academia is publications and staying focused on finishing projects and getting them into a publication pipeline will help you succeed. I expect you to be first author on at least 3 substantive publications for your dissertation. An average of one paper per year is a clear goal to be competitive in the academic marketplace at this stage. One of the biggest mistakes for graduate students is to write up all their chapters in their last year. This will set you up with obstacles that will affect every subsequent step in your academic path.

I will expect you to read, and reread, *Writing Science* by Joshua Schimel. You can also expect me to invest substantially in the development of your scientific writing. If you are planning to submit a meeting abstract I want to give you *at least* 2 rounds of comments on your writing. If you are preparing a peer-reviewed manuscript, this number will be much higher – 10 or even 15 rounds of revision are quite common. Even if you already consider yourself a strong writer, I will want to see drafts of your work well ahead of time. You should plan on me returning comments to you within ~1 week. So please plan ahead and back calculate the amount of time necessary. It is often impossible for me to give meaningful feedback at the last minute.

You can expect me to help you navigate issues of collaboration and authorship for your publications. I believe that co-authors need to make a significantcontribution to at least one (ideally more) of the following categories: intellectual development of ideas, data collection, data analysis, writing, funding. To be clear about my own role, I will generally be last author on publications coming out of the lab. First authors will also generally be corresponding authors on all publications. Authorship decisions will always be made with open communication among all authors. Many people feel uncomfortable discussing these issues, but learning how to talk openly about our expectations and contributions removes anxiety and builds trust.

You can also expect me to help you strategize about journals and help carve out what constitutes a “publishable unit”.

Finally, I expect you to cultivate a routine writing practice. Writing should be like brushing your teeth, not like going to the dentist, i.e. it should happen in small amounts every day, not in infrequent binge episodes. This is not personal opinion – consult any academic writing guide and it will say that daily writing will lead to much higher productivity and efficiency than binge writing.

**Coursework and Qualifying Exams**

I am a coursework minimalist but expect you to complete your required coursework as soon as possible. As much as possible, additional coursework should be tied to your own research goals and/or preparation for your qualifying exam. Coursework should include quantitative methods tailored to your research.

Due to departmental constraints, international and non-resident students will be required to complete their qualifying exam *before* the start of their 5th semester. For other students, I highly recommend that qualifying exams be completed before the end of their 5th semester. I will also expect all non-California U.S. residents to apply for California residency as soon as they arrive on campus.

**Career planning**

My true goal is to support your pursuit of a path that will make you feel fulfilled. I am most qualified to help you pursue a career in academia, but I will help you in any ways possible work towards other career goals. I will support your career progression by discussing your career options with you, helping you network, writing you letters of recommendation, and helping you learn how to succeed in or out of the academic arena. Once you decide what your long-term goals are, you should expect me to push you to match your actions to your goals.

**Work-life balance**

I cannot stress enough how the time you put in as a graduate student will pay off later in your academic career. The momentum you create now will be momentum that carries you through your post-doc and even your first academic job. Academia is a hard career path but one that can be successful navigated if you are productive and dedicated. As such, work-life balance is one of the most important issues for everyone in academia.

I expect people in the lab to be dedicated and hardworking. There will be times in the year where you will run experiments into the early hours of the morning or be out in the field from dawn to dusk, working hours that seem absolutely ridiculous. Other times will be decidedly less so and will be opportunities to recharge. Often these times will correspond to seasons. Research in agriculture means work is tied to seasonal cycles of growing. For instance, if you are in a stage when field work is demanding, it may be challenging to schedule vacations or travel during the summer.

In short, manage your energy, not your time… This is a marathon and not a sprint. In the end, the thing that matters most for establishing a successful research career is publications as well as a well-developed research program. How one gets there can be very different and the important thing is to be efficient and understand what strategies work best for you. Figure out your best hours of the day and protect those ruthlessly for the most important intellectually demanding tasks, most often writing. Different people will have different strategies for success and these strategies can vary greatly. Depending on time management and other strategies, I have observed graduate students who work 80 hours per week and those who work closer to 40 with similar levels of accomplishment. Regardless of specific strategies you use, the important thing is to keep motivated and fresh, so try to find ways to recharge on daily and longer time scales. Your enthusiasm for your own research is your best ally and one that has to be managed and cultivated. The more recharged you feel that better you will be at thinking/writing/running experiments which will be directly related to your success as a scientist. Try to develop strategies to manage that effectively.

**Agreement**

I, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, have read the Bowles lab expectations and understand them. I will hold myself and Tim accountable for striving to meet these mutual expectations.

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