Berkeley Agroecology Lab Joint Expectations for Postdocs

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, satisfying funding agency requirements, and developing valuable information for farmers and policymakers.

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 support staff (HR, purchasing, greenhouse and field, contracts and grants) 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. As you likely already know, you learn a tremendous amount from repeated, casual conversations with your labmates, and some may turn into life-long friends and collaborators.

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. These duties do not fall on just the staff members in the lab. 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 and lab cleanup sessions, unless you are traveling for a conference or busy with field work. Lab meetings 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.

If needed, 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. This is also great for building 'team' projects that can end up being shared projects and with opportunities for co-authorship.

Independence

I expect that postdocs will function with a high degree of independence. This applies both to your broad intellectual explorations and also your day-to-day operations. Being independent means being *internally motivated, strategically planning for the future, and proactive in finding solutions to problems*. But operating with a high degree of independence does not mean that you will not receive support from me and others in the lab, or that I do not want to be engaged at all stages of your research. To the contrary, working with postdocs is one of the aspects of my job I enjoy the most. I expect that we will discuss everything from defining questions (or refining, in the case of questions defined by grants funding your position) to planning experiments to analyzing and interpreting data. I enjoy doing this in a collaborative way that recognizes your expertise, and thus I expect that you will take the lead on each of these aspects. For instance, I expect you will come prepared for our meeting having done literature reviews, data analysis, etc. as appropriate, so that we can have a productive discussion. You can expect me to engage in these conversations regularly, sincerely, and openly.

Communication

You can expect me to be highly committed to your development as an independent scholar and scientist. You can expect me to meet with you regularly. I expect that you will come to these meeting prepared with questions, ideas, discussion topics, data, 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. As you have likely experienced during your PhD, 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 my lab, 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. When you leave the lab, a copy of the data collected for your projects in my lab remains.

Organize your samples carefully with highly informative labels, be detailed with your research notes, etc. I aspire for our lab to use principles of "reproducible science" for our digital data. Of course, be rigorous about lab and field safety, lab and field equipment, lab records, field notes etc.

Our lab has several pieces of equipment (elementar analyzer, plate reader, microscopes, drying ovens, etc) that are 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

Postdocs typically come into my lab funded on grants from federal or state agencies. This does dictate what must be done in the immediate future to satisfy granting requirements; however, I expect after year one that postdocs will take on the responsibility of writing annual grant reports, and I encourage postdocs to pursue external funding for their research ideas. This could include both small grants (e.g., Organic Farming Research Foundation) and large fellowships (e.g. AFRI postdoc fellowships). As with experimental designs and publication drafts, I will review all proposals. Be sure to allocate plenty of time for these applications. Almost all 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. For larger grants, at a minimum, I expect to see a full draft at least 3 weeks prior to the internal 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 more flexible, but I expect a full draft 2 weeks prior to the internal deadline and a goal of submitting to SPO before their 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. Most of our grants have funds for presenting at conferences, and this is of course an essential thing to do at this stage of your career. I will also try to come up with funding for workshops or other opportunities that are related to our research (e.g. at SESYNC, Santa Fe Institute, etc). and/or support your applications for funding to do so.

Publications

You already know that 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. For postdocs, I expect that during the first year you will have 0-1 first-authored publication from work in my lab – although those postdocs coming onto ongoing projects have the potential to be a co-author on that ongoing research where the lead author is the lab PI or other current or previous postdocs. I expect in the second year postdocs should have 2 first-authored publications from work in my lab, and if collaborative teams have been set up to be a co-author on other publications, even more. In the 3rd – 5th year, a postdoc should have an established lab inside the lab, and I would expect 2-3 first-authored publications per year. Note that with mentoring, undergraduate lab assistants and/or staff research specialists can be excellent collaborators and included on papers, sometimes even as first authors on papers when they have shown initiative to conduct their own project. I encourage this development of undergraduate research.

If you haven't already, I will expect you to read, and reread, *Writing Science* by Joshua Schimel. You can expect me to invest substantially in the continued development of your scientific writing. If you are planning to submit a meeting abstract I want to give you *at least* one round of comments. If you are preparing a peer-reviewed manuscript, this number will be much higher. Even if you already consider yourself a strong writer, I will want to see drafts of your work well ahead of time. When you send me a draft of a manuscript for the first time, I would like the manuscript as complete as possible, with text and ideas fleshed out for all sections, prepared as though you could soon be ready to submit it to the journal. Of course, as you're writing we can discuss whether the story makes sense, how to make it compelling, issues with statistics, drafts of figures, etc. But it be can hard and very time consuming to make comments and edits on a draft that has lots of incomplete sections and/or thoughts. As we publish together and our styles begin to merge, my comments will likely be fewer. You should plan on me returning comments to you within ~2 weeks. 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 significant contribution 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". For target journals, I like to see a mix, and to prioritize open access when possible. Always try for the better journal, but be reasonable about the manuscript's potential. Consider developing 'lab-group' or 'team' publications that are reviews as these are often in better journals and cited frequently.

You are likely bringing unfinished projects and manuscripts with you from your previous position(s). This is normal. I expect that you will spend time preparing, submitting, and revising these publications while you are in this position, and that is normal too. This works when we agree that you will finish the manuscripts coming out of your projects with me, even after you have left – no matter your career path. This is essential, not least because we owe it to the taxpayers of this state and country, and the stakeholders interested in our work, to deliver on what we said we would do when they gave us money to do it. I understand that sometimes your work on publications from prior positions will even be a substantial portion of your time, e.g. when you are revising a manuscript. This is ok too, at least for the first 6 – 12 months of your position. After that, I expect that you will spend most of your "business hours" working on projects related to your position in my lab.

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.

Mentoring and lab/field work

Being a postdoc is an excellent time to continue developing your mentoring skills. I would encourage you to seek out opportunities to do so with the undergraduate and PhD students in the lab. For undergraduates, there are many opportunities and ways to do so, from providing excellent hands-on lab and field training for our technicians, to helping students develop their own independent projects through SPUR or other programs (see me about what this means). For PhD students, mentoring can occur in many ways as well. Occasionally I may ask you to help a PhD student develop a specific idea or method, but I would never ask you to be their primary mentor.

I would like for you to spend most of your time on the most intellectually demanding aspects of your projects, and I will try to facilitate this by providing as much help from undergraduate technicians and staff researchers as possible. But there will be many times during sampling campaigns when your own time in the field and lab are essential. Also, there may be complex lab measurements that require your time to conduct the analyses yourself.

Career planning

My goal is to support your pursuit of a path that will make you feel fulfilled – truly. 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 postdoc will pay off throughout your academic career. The momentum you create now will be momentum that carries you through your career, especially your first academic job. The projects and papers you start now are often the ones you work on in those crucial first years as a faculty member or professional researcher. 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. As you likely experienced during your PhD, 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 (sorry for the cliché). In the end, the things that you are judged on for establishing a successful research career are publications and 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 postdocs who work 60 hours per week and those who work 40 with similar levels of accomplishment. For me personally, I try to be strategic about my time and commitments, highly-organized, efficient, and have a regular work schedule. This allows me to have work be one of several important parts of my life, not the only one. 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.

_____ (signature) _____ (date)

_____ (Tim's signature) _____ (date)