McArt lab guidelines and approach to advising
Revised 2022/10/09

This document is reviewed annually by all lab members and updated according to comments.

General lab culture / advising style

Students (of all levels) are the lifeblood of our lab. You bring energy, inquisitiveness, new ideas and leadership. I consider it my main responsibility as an advisor to foster the best environment possible for you to excel. This includes facilitating an open and collaborative lab environment, encouraging you to learn new things, and providing the tools and advice necessary for you to reach your professional goals. My goal is to help you do great science while you become part of the broader scientific community. My hope is that *our* goal is to advance the research, teaching, extension and intellectual advancements of the lab as a whole.

In my experience, graduate students and postdocs are most successful when they work independently but keep me fully engaged. By working independently, you have the freedom to sculpt your own research program while developing the myriad skills necessary to be an effective scientist. By keeping me fully engaged, I'm able to give you the best feedback possible regarding the constantly evolving needs of your projects and development. Keeping me engaged can happen in many ways, including informal drop-ins (my door is always open!), weekly meetings, formal presentations, sharing of in-progress grants and manuscripts, etc. Our day-to-day balance between independence and engagement will almost certainly change over time, and communication is critical for striking the right balance. For example, during preparation for major field or lab experiments, I would like to be deeply engaged with you in experimental design. On the other end of the spectrum, I feel that I would simply be getting in the way if you kept me up to date on daily changes you make to the discussion section of your manuscript.

For technicians and undergraduates, my goal is to strike the right balance between supervision and providing you the independence necessary for a productive environment. Since you're contributing to major coordinated lab efforts, I (or your immediate grad student or postdoc or technician mentor) would like to be relatively engaged with you on a day-to-day basis. However, I recognize that micromanaging every detail is counterproductive. I was an undergraduate and technician at one time, too, and I hated being micromanaged. Overall, my goal is to work closely with you to do cool science, and to provide the context for why it's cool science while we do it.

Some specific guidelines

1) I have an open-door policy anytime you want to stop by and chat. About anything.
2) I try to split my time between Comstock, Dyce, and working from home. Please feel free to keep whatever hours in the lab are most conducive to your schedule. However, if we tend not to overlap in time or space, I consider it your responsibility to keep me up to date. When in doubt, please err on the side of overcommunicating. I'm genuinely excited to know how things are going for you!
3) For grad students and postdocs who are starting in the lab, my preference is to meet weekly for the first several months to check on how things are going, strategize, and see how I can help. After that, we can adjust our meeting schedule to whatever fits your personality best.
4) Time management is one of the most important things every scientist needs to grapple with. Field research is rarely a consistent 9-5 endeavor and lab analyses can pile up. Sometimes experiments will require more time. Sometimes they'll require less time. I'm here to help you plan, work as *smart* as possible, and try to ensure your time commitments are reasonable. Sometimes it will be necessary to put in the time and work hard. What "working hard" means is up to you and your personality. Ultimately, it's up to you to ensure you're making progress on your science while taking care of yourself. Most importantly, *don't burn yourself out*. And please don't feel guilty about taking time for yourself when you need it. I strive to keep a healthy work-life balance every day, I take multi-week

vacations ever year, and I encourage you to take breaks to recharge and enjoy the beautiful world outside of Ithaca/Cornell.

5) I strongly encourage all current and prospective students and postdocs to apply for grants to support your salary and research. **If you're a prospective student or postdoc, please send me an email and we can discuss possible proposals!** Applying for grants is excellent professional development, looks great on your CV, and it also helps the lab in general. Some links to student/postdoc grants:
    a. Griswold and Rawlins (Cornell Ento Dept. grad student research and travel grants): https://entomology.cals.cornell.edu/sites/entomology.cals.cornell.edu/files/shared/documents/EXUVIAE%202019.pdf
    b. Cornell Grad School Conference and Research travel grants: https://gradschool.cornell.edu/policies/conference-and-research-travel-grants/
    c. Atkinson Center (Cornell grad student and postdoc research grants): https://www.atkinson.cornell.edu/grants/
    d. NSF Graduate Research Fellowship Program (GRFP): https://www.nsfgrfp.org/
    e. USDA NIFA Predoctoral grad student fellowship: https://nifa.usda.gov/funding-opportunity/agriculture-and-food-research-initiative-education-workforce-development
    f. Cornell Host-Microbe Interactions & Disease postdoc fellowship: https://cihmid.cornell.edu/cihmid-opportunities/cihmid-postdoctoral-fellows-program/
    g. NSF Postdoctoral Research Fellowship in Biology Program (PRFB): https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503622
    h. USDA NIFA Postdoctoral fellowship: https://nifa.usda.gov/funding-opportunity/agriculture-and-food-research-initiative-education-workforce-development

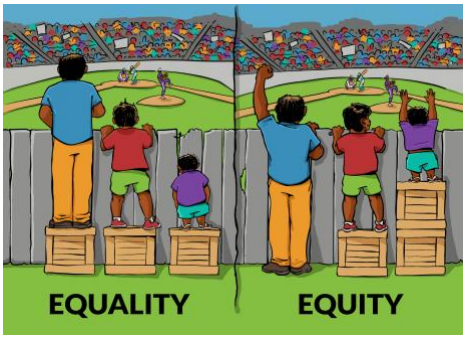
    International students will have other opportunities for grants and fellowships. If you plan to apply for a grant, please let me know!
6) As you accumulate data and conduct statistical analyses on those data, you will need to organize your data/analyses in spreadsheets and folders. When starting in the lab, you will either be given a McArt Lab Cornell Box folder (a cloud storage system similar to Dropbox that our lab uses for within-Cornell data back-up), or you'll be linked to a project Dropbox folder that we use for multi-institution collaborations (e.g., "BEEID" or "USDA Pollinator Health"). **All data, final scripts for your analyses, and final manuscripts must exist in one of these shared folders.** This is for two reasons. First, the folder is cloud-based and therefore provides a back-up in case your hardware crashes. Second, your scripts especially may be useful for future lab members who want to conduct similar statistical analyses. Thus, everyone's folders represent a "lab library" so current lab members can stand on the shoulders of giants (i.e., you ☺). I will work with you during your first few weeks in the lab to set up your folder and will check in periodically.
7) I strongly encourage all lab members to present their research orally and via posters at Cornell and at national/international scientific meetings. Being able to communicate your research effectively is a major part of being a scientist, but it's a skill that comes naturally to few. Luckily, the more you practice, the better you'll get! The Plant Interactions Group (PIG), Pollinator Reading Group (PRG), and January Ento symposium are excellent venues within Cornell. Relevant scientific meetings (Ecological Society of America, Entomological Society of America, International Conference for Pollinator Biology, Health and Policy, Ecology & Evolution of Infectious Diseases, etc.) are excellent venues within the broader scientific community. I recommend attending one major national/international meeting per year. Our current lab policies:
    a. The first time you present lab research in a public setting, please set up a time to practice the talk with me and/or the lab (e.g., at a lab meeting that you lead).
    b. I will "top up" funds for grad students to fully cover one national/international meeting per year, as long as Rawlins and Cornell grad school travel grant funds have been requested by you. For postdocs and technicians, one meeting per year will be fully covered via the grant

that you're working under (as long as you present work related to that grant!) or your fellowship funds.

8) My policy is that all major written materials generated from the lab (grants, manuscripts, non-refereed publications) pass through me. Anytime I receive written material from you, it becomes my #1 priority to return it to you in a timely manner. Generally, you can expect me to return comments to you within two weeks unless I have a particularly hectic schedule. If you alert me that written material will be coming, I can plan and likely get comments back to you quicker!
9) I like to start editing your manuscripts at an earlier stage than most advisors. I think this leads to less wasted time for both of us. After meeting in person (likely several times) and deciding on the "results narrative" (i.e., the story that the major results tell), I would first like to see the outline of the manuscript. Next, send me the "paragraph structure" for your manuscript. This is essentially one step beyond an outline; you've started to form the paragraphs for your intro/methods/results/discussion, but they're still pretty rough, you haven't spent time vetting each idea thoroughly, and certainly haven't started polishing grammar, spelling, etc. Don't be shy! Trust me, this is the most efficient this way to write together – the major ideas are the most important part of writing, all the rest is just details for how to communicate those ideas most effectively.
10) If you wrote the paper, you're the first author. In ecology/entomology, the senior author is typically the last author (which might be me as the lab PI, or it might be someone else depending on the situation). Beyond this, there are many philosophies regarding authorship. My philosophy is to be as generous as possible. If anyone contributed substantially to intellectual development of a project, laboratory or field experiments, analyses, and/or writing, they should probably be an author. That said, there's no reason to go overboard. If someone helped but their help wasn't substantial, they can be acknowledged at the end of the paper. Since it's impossible to create unambiguous criteria for "substantial" vs. "less-than-substantial" contributions, this must be decided on a case-by-case basis. To avoid uncomfortable situations down the road, I highly recommend talking openly to potential co-authors before and during a project that has some likelihood of being published.
11) Beyond your research, please keep me informed regarding the professional activities you're involved in (outreach, department service, speaking engagements, etc.). This is important information for me to know in terms of reporting to the department and writing into grants. I'm also very interested to know all the cool stuff you're up to!
12) We're part of an incredible community of scientists at Cornell and I encourage everyone in the lab to take advantage of this community. I expect all lab members (other than undergrads) to attend our weekly lab meetings, and I strongly encourage you to attend the weekly Entomology departmental seminar, Pollinator Reading Group (PRG), Plant Interactions Group (PIG), and/or Ecology & Evolution of Infectious Disease (EEID) journal club. Beyond this, there are practically limitless seminar and event opportunities at Cornell. My advice is to be selective. If you hop from one seminar to another, you may end up doing nothing except attending seminars during your time at Cornell ☺.
13) We share many resources in the lab, including space, equipment, supplies and of course our beloved shiny red Rainbow Dash (i.e., the lab truck). Please leave things that you use in the same (or better) condition when you're done using them, and please leave lab spaces in the same condition (or better) when you're finished. If something breaks, let me know immediately so we can fix it. Things will break (I break things all the time!). The key is to get things fixed in a timely manner so it minimally impacts other people who also rely on whatever is broken.
14) Our growing list of common lab purchases is located in our shared lab folder on Box. Ordering is coordinated by our lab manager (Paige). If you have something to order that isn't on the list, please identify the exact item on eShop and forward this info to Paige along with relevant info about quantity to order, etc.
15) Each year, we devote a day to "Lab Professional Development" (also called "Lab Therapy"). The purpose of this day is to have some fun (e.g., go for a hike in a cool park), share what went well and didn't go well professionally over the past year, and share 1-, 3-, and 5-year goals. All lab members

are strongly encouraged to come. How much you choose to share is entirely up to you, but the prep work (i.e., sitting down for an hour beforehand and really thinking about your accomplishments and goals) should be done by everyone.

16) I care about you and I want you to succeed. I would not have recruited you to the lab if that wasn't true. If you're having bumps in the road (which is common!), I'm available anytime if you want to chat. You also have lots of additional resources at your fingertips. For example, the Ento DGS (currently Jennifer Thaler), HR representative (Cheryl Gombas), and several University-wide programs (e.g., Title IX officers: http://titleix.cornell.edu/ and performance dialogue experts: https://hr.cornell.edu/professional-development/performance). Please be proactive! Sometimes I can tell that it would be good for me to initiate a conversation, but sometimes I can't tell that something is amiss. I can guarantee if you're proactive about acknowledging and addressing bumps in the road, you will thank yourself later.
17) Our lab was instrumental in shaping the department's field safety policy and ensuring field safety vests are available for anyone. Our lab's field safety vests (designed by alum Kass Urban-Mead!) are available in a drawer in the back of 4129 Comstock. Our field safety policy can be found in the "Lab resources" folder on Box, and is called "McArt Lab Field Safety Plan". All lab members are required to have a field safety plan in place when conducting field work.
18) I value every person's unique perspective and strive to create a safe environment that promotes social/racial equity so all lab members can develop as scientists/people and bring their full selves to work.



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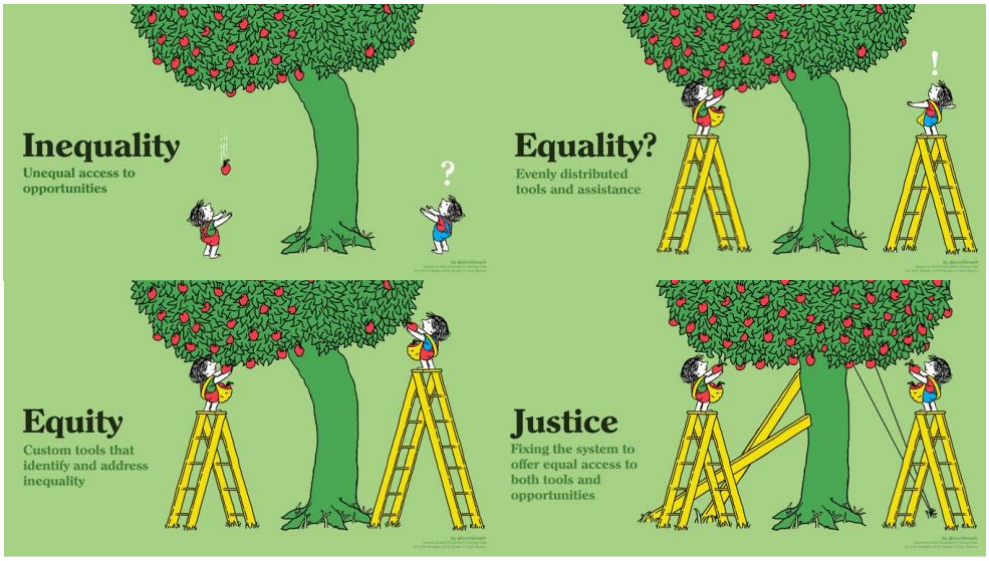

To create a safe environment that actively promotes equity, our lab developed the following list of expectations, suggestions, and resources in July 2020 in the wake of the murder of George Floyd.

All lab members are expected to

a. Actively create space for everyone to participate. We understand it's easier for some people to take up space (e.g., dominate group discussions), so we make sure to "take space/make space" by actively discouraging interruptions during discussions while also ensuring opportunities exist for all lab members to comment.
b. Respect each other's opinions, but actively discourage opinions or language that's offensive or promotes exclusion rather than inclusion. If you're not comfortable confronting the person whose language/opinions are offensive or a particular situation that made you uncomfortable, please communicate this to Scott privately so we can decide the best course of action. If you're not comfortable discussing a particular situation with Scott, see additional resources in point #16 above.
c. Participate in one lab meeting per semester where we discuss a topic on racism, equity, diversity/inclusion, or acknowledging/reducing bias. After each of these meetings, we will add slides to an ever-growing Powerpoint that will be available to incoming lab members (and that current lab member can refer back to).
d. Participate in an annual discussion during "Lab Therapy" when we discuss pros/cons of the lab environment and elements we want to concentrate on strengthening during that year.

For those who would like to be more proactive in terms of promoting equity and/or combatting systemic racism or social injustice, below are some suggestions. Scott recognizes that devoting time to these actions/activities will take time away from your science.

Individual/lab-level actions

a. Read current/classic research on the history of policing, police brutality, successful interventions to reduce brutality, and racial justice and abolition work.
b. Participate in a group whose goal is combating inequities and/or systemic racism. The Department of Entomology has group that is organized around these goals (call *Community and Conversations*), and other groups exist.
c. As part of (or in addition to) the *Community and Conversations* group, create a google doc or blog for an ongoing discussion of racism and diversity/inclusion.
d. Spend a minute during our regular "highs and lows" lab meeting discussion talking about racism, equity, or diversity/inclusion.
e. Read/discuss scientific papers written by under-represented groups during lab meeting and/or PRG.

Department-level actions

a. Advocate for a new BIPOC postdoc-to-faculty position in Entomology. This person would be hired as a postdoc with a path to becoming a tenure-track faculty member in the department.
b. Advocate for more BIPOC grad student, faculty, and staff hires.
c. Be more proactive about calling out microaggressions or non-inclusive behavior by faculty, staff, and students.
d. Encourage involvement in the DEI departmental committee.
e. Advocate for choosing Entomology department seminar speakers from underrepresented groups. This includes faculty, postdocs, and those that have chosen non-academic careers. Also, advocate to give speakers the option to come in person or participate via Zoom once COVID is no longer a risk, as to not overwhelm or exhaust them.

Higher-than-department-level actions

a. Advocate for additional financial support for the multi-department Diversity Preview Weekend (DPW).
b. Work to improve recruitment of DPW candidates into Cornell labs.
c. Advocate for additional University-wide resources regarding racism and diversity/inclusion (e.g., multi-hour in-person training courses for current faculty, students and staff).
d. Advocate for a University-wide faculty hiring initiative that promotes diversity/inclusion.

Finally, below is a list of resources regarding racism, bias, and diversity/inclusion. Additional resources, programs and events can be found on the University's diversity webpage: https://diversity.cornell.edu/

Articles

i. 75 Things White People Can Do for Racial Justice by Corinne Shutack
ii. Do Conversations About Race Belong in the Classroom? With an update from Beverly Tatum
iii. White People, Read This Before You Text Your Black Friends by Tomi Obaro
iv. White Women Need To Do Better by Shannon Keating
v. One Question White People Should Stop Asking – What About Me? by Erin Okuno
vi. White People as Individuals by the Fakequity blog
vii. Social Justice on Social Media by Sidney Malia White
viii. "When Silence Is Betrayal" - What Must Be Said About The Killing of George Floyd by Seth Cohen
ix. Non-Black Latinx Resources on Anti-Blackness compiled by Andrew Garcia Chavez

Books

x. Stamped: Racism, Antiracism, and You by Ibram X. Kendi and Jason Reynolds
xi. Me and White Supremacy by Layla Saad
xii. White Fragility: Why It's So Hard For White People To Talk About Racism by Robin Deangelo
xiii. Beloved by Toni Morrison
xiv. So You Want To Talk About Race by Ijeoma Oluo
xv. Why I'm No Longer Talking to White People about Race by Reni Eddo-Lodge

Podcasts

xvi. Code Switch from NPR
xvii. Intersectionality Matters with Kimberlé Crenshaw
xviii. 1619 from New York Times
xix. Uncivil from Gimlet Media

TV Shows & Movies

xx. Dear White People
xxi. When They See Us

Social Media Posts

xxii. Ways Empaths Can Help Combat White Supremacy
xxiii. Journal Prompts to Help Explore White Privilege and Shame
xxiv. 7 Ways Non-Black People of Color Perpetuate Anti-Blackness
xxv. 87 ways you can help
xxvi. Why You Need to Stop Saying "All Lives Matter"

Other Resources

xxvii. Google Doc with anti-racism resources
xxviii. Decolonize your mind reading list
xxix. Anti-Racist Reading List
xxx. Implicit bias test
xxxi. Anti-Racist Allyship Starter Pack
xxxii. 500 Women Scientists' Action List
xxxiii. Ithaca Local Black Owned Businesses
xxxiv. PoC Shopping Guide