Patel Lab: Living document of general guidelines and actionable expectations

I am so glad to have you in the lab! Here is my perspective on how we can have personally and scientifically productive, rewarding, and fulfilling experiences. However, let me know if you think something is missing – this is a tool meant to help us and I am very open to improving it.

General guidelines
Here are some (evolving) guidelines based on my experience. They are by no means comprehensive or the ‘right’ way to do science. I share them with you in the hopes that you may find them helpful.

1) Outlook
- Isn’t it better to let go of our past and instead learn from it to improve our future?
- I know it is hard but shouldn’t we be grateful for our failures and mistakes? How else are we going to learn?
- I know this can be hard to accept, especially when things are not working, but science doesn’t play favorites. Experiments are equal opportunity frustrators!
- Let’s not discount the hard work of our peers by attributing their success to just their luck or smarts.
- Helpful resource: *Mindset by Carol Dweck.

2) Approach
- I like the saying “If you have more than three priorities, you don’t have any”. It reminds us to resist our urge to do more. Our time and effort are limited, and we need to focus on a few things to do them well.
- Helpful resource: Nobel Laureate Jeffrey Friedman's inspiring article “The long road to leptin”.

3) Communication
- I think most people want to help. But if most people are like me, they are not very good at knowing when someone needs their help. Please do folks like me a favor and explicitly ask for help when you need it!
- Set your own priorities and view me as a more experienced colleague who can provide guidance/feedback.
- If you feel overwhelmed or feel like you have too much on your plate, communicate this with me. It will make us both feel good if you share this with me. Not to mention, we can then do something about it!
- Actively seek and embrace constructive criticism/actionable feedback. They are tools for improvement of your science and your growth as a scientist.
- Helpful resource: *Great on the Job by Jodi Glickman. Actionable advice for effective communication.

4) Publications
- Serve as a source of pride and remind us of all the hard work that we did.
- Allow us to communicate our findings with the scientific community.
- Serve as measurable metrics of our productivity to help us advance in our careers.
- Helpful resource: *Writing science: How to publish papers that get cited and proposal that get funded by Joshua Schimel.

5) Lab citizenship
- We often spend more time with people in lab than at home. Help me create the kind of lab culture that you would want to be a part of. I would want to be in a lab that is collegial, and fun!
- I would also want peers who push me to reach my full potential by giving me honest criticism on my writing and presentations, and take the time to critically evaluate, challenge and debate my ideas and experiments.

*We have all these books on our lab bookshelf.
Simple but essential actionable expectations for everyone
We will be immensely better off in our lab life if we all strive to meet these simple but essential expectations.

1) Safety. Let’s take care of ourselves.
- Complete all training as required and comply with all institutional policies on safety.
- Learn procedure for handling and disposal of chemicals. Read the lab Biosafety Notebook and sign it.
- Become familiar with how to use the chemical spill kit, lab shower, eye wash, and first aid kit.
- It’s not a good idea to eat or drink in lab. Water bottles should be capped and kept in a drawer or backpack.
- Wear close-toed footwear.
- As a matter of courtesy and safety, clean up shared space and equipment immediately after use.
- Keep your bench clean and free of fungal spores by wiping it at least monthly with 70% ethanol or ConFlikt.
- It is important for everyone’s safety to know what’s on your bench and shelves. Label every bottle and tube.

2) One-on-one meetings. Provide us an opportunity to focus on you and your science.
- Update me on your short-term and long-term goals so I can provide guidance/feedback.
- Share summary of our discussion via email or Dropbox so that we can stay on the same page.

3) Research records. The more dedicated you are with record keeping, the more you will thank yourself later.
- Whether you keep a physical or electronic lab notebook is your choice.
- Date each experiment and have a table of contents for each lab notebook. It will hopefully help you and it will certainly help me to look things up long after you have left the lab.
- The experimental record in your lab notebook serve two purposes. First, it helps you determine what might have gone wrong when an experiment fails. Second, it provides a historical record of what you did. It should be detailed and clear enough for you to be able to repeat the same experiments even years later.
- Freeze every worm strain that you make. You will save yourself and others the effort to remake it.
- Follow C. elegans nomenclature precisely when freezing strains so there is no ambiguity as to its genotype.
- Assign a unique ID to any primer or plasmid you ever make. I learned this the hard way in grad school.
- Back up all your data at least monthly. I would hate for you to lose your hard-earned data!

4) Lab meetings. Venue to share our setbacks and progress, as well as give and receive feedback.
- Do yourself and others a favor by finishing your presentation the night before and putting it on Google Drive.
- If you are presenting, it helps us to know what you want to get out of the lab meeting.
- If giving practice talk, aim to give the first one at least a week before the actual talk so you have enough time to incorporate the feedback that you receive.
- If giving journal club, send out the paper at least a week before so other folks have enough time to read it.
- If you cannot attend or will be late, be considerate and notify me and the presenter(s) ahead of time.
- No use of electronic devices. We all know that feeling of not being heard when someone is on their device while we are presenting. If your text or phone call cannot wait, please be respectful and step outside.

5) Vacation
- We all need time off for a variety of reasons. But ask me before you decide to take off a day or more. It helps me to know when you will be away for scheduling purposes and to coordinate effort.

6) Well-being
- If you are sick, rest and get well. Just communicate with me that you are unable to come in so that one, I am not worried, and two, I and the rest of the lab can plan accordingly if needed.
- Communicate with me if your health is affecting your work so that we can explore reduced effort, leave of absence, inform your committee or HR, and ensure you have access to appropriate resources.

7) Lab calendar
- A communication tool for sharing common events such as lab meetings, candidate interviews, seminars, etc.

Updated August, 2019
Guidelines and actionable expectations for each of us

Me
Guidance
- I care deeply about getting it right, not being right. I welcome you to call me out if (when) I forget to be humble.
- Reviewing your proposal and manuscript drafts is my priority. Allow time to go back and forth multiple times.
- YOU matter to me. I will make time for you.

Resources
- I will provide caffeine. Need I say more? 😊
- I will try my best to secure funding so you have the resources and reagents that you need to do your work.
- If you want to give a talk or present a poster, I will support you to attend at least one conference a year.

Support
- I value your opinion and will solicit your feedback when new members may potentially join us.
- As a PI, there are few things that bring me more joy than to see your efforts get recognized. I will nominate you for awards and fellowships that I think you are competitive for.
- If you wish, I will show you the recommendation letters I write for you.
- As I think it is inappropriate, I will not discuss you with another lab member.

Mentoring
- I am deeply vested in your success. Consequently, improving my mentoring skills and growing as a PI are my top priorities. I welcome your feedback and criticism – I will view them as your investment in my success.
- If you think I am not keeping my promises, you are welcome to call me out on it. If you feel that I am not receptive to your concerns, if you are a student, I encourage you to talk with your committee, or the DGS if you don’t have a committee, who can help with the next steps. If you are staff, talk to HR. If you are a postdoc, you should reach out to the Department chair.

Do you have specific expectations and unique needs that we need to discuss?
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Graduate students
Program requirements
- Be proactive about knowing and meeting all program requirements (coursework, qual, committee meetings, defense, graduation, etc.) [https://as.vanderbilt.edu/biosci/graduate/programrequirements.php].

Funding. Helps you develop and show your science communication skills.
- Keep applying until you get a fellowship. It usually takes more than one try.
- If you get funding, then you are helping the lab support another member.

Conferences. Provide an opportunity to share your findings, network, and travel.
- Save cost by registering early and selecting on-site housing with a roommate.
- Apply for travel grant from conference, internal travel grants from Vanderbilt, and use your Mosig funds.
- Prepare a draft of the abstract at least two weeks before the deadline so we have time to improve it.
- Submit the abstract early enough to qualify for an oral presentation.

Extra-lab activities. Provides ways to engage in professional development outside of lab.
- Please discuss with me before committing (classes, teaching, grading, outreach, workshops, etc). These activities may be helpful but we should discuss whether the time commitment is worth the cost.
**Ideal achievements.** While it might not always be possible, I consider these to be ideal achievements for a PhD.
- Highest priority. At least two first author publications.
- Middle priority. One grant.
- Lowest priority. One review/preview/methods paper.

**Ideal timeline.** Again, while it might not always be possible, I consider this to be an ideal timeline for a PhD.
- 1st-2nd year – Finish all required coursework, TA requirements, and pass the qualifying exam. Make sufficient progress in research to have the makings of a thesis.
- 3rd-4th year – Publish first primary author paper and obtain funding.
- 5th-6th year – Publish subsequent first author papers. Cultivate professional development geared towards a career of choice (e.g. internships, workshops, etc). Write thesis. Line up next position.
- 2nd-6th year – Write a review/preview/methods paper whenever opportunity presents itself.

**Staff**
- It’s useful if you tell me what you want to get out of this and communicate your long-term career goals as they develop so I can help if possible.
- Proactively communicate with me if you think your tasks don’t allow you to use your time and effort efficiently so that we may reconsider your priorities.
- Let me know how I can help you so that you can do your job.
- You are as much a member of this lab as anyone else. If someone asks you to do something that we haven’t explicitly discussed, tell them to speak with me first.

**Rotation students**
- Proactively communicate your scientific interests, so I can help you tailor rotation projects.
- Let me know if you have specific needs and how I may best help you.
- Talk to everyone about their project so you can determine whether you like the lab’s research program.
- Get all your questions answered so you can make an informed decision. Whether it’s this lab or another, what’s important is that you pick a lab that’s ‘right’ for you.

**Undergraduate students**
- Work with another member of the lab.
- Someone in lab is investing their time to mentor you. Be consistent, reliable and proactively communicate with them if you cannot meet your commitments or if your schedule changes.
- Let me know as early as possible if you would like to work in lab over the summer so we can find funding.
- You are encouraged to attend lab meetings. There is no hierarchy - you can be as vocal as anyone else.
- BSCI3861 and 3961 course descriptions outline explicit expectations that I use to give you a grade.