

Piper lab

Research in the PiperLab

Our lab aims to make a meaningful and lasting impact on nutritional physiology through evidence-based research. We use the fruitfly *Drosophila melanogaster* as a model organism, and concentrate on evolutionarily conserved aspects of nutrition and nutrient-related signaling with the goal of finding ways to enhance health and life in all animals, including humans.

This document gives an overview of how we operate and lays out expectations for the roles we play.

Overview

In my research role, I am expected to initiate research, write grants and publish in a way that will make a tangible contribution to science, the academic community, and to society. Your training is part of this process and by engaging in this process together, we will succeed in this goal.

It is imperative that we undertake our science in an ethical and rigorous manner. While the ultimate goal of our research is to enhance lives through nutrition, our immediate work is to publish in scientific journals and communicate with the public. Dissemination of the knowledge we gain is critical to the advancement of our field and to dispel myths that surround nutrition and health. I expect all lab members to participate in the lab and operate with these goals and principles in mind.

I also want people to enjoy their work and science. I strongly believe that we will be most satisfied, productive and well-balanced when we use our individual strengths to promote the success of each other. The pursuits of scientific knowledge is not a zero-sum game, there are plenty of unknown things to go around. If we facilitate each other, we will be more successful in work and life.

WHAT YOU SHOULD EXPECT FROM ME

- **I will work** for the good of the lab group; the success of every member of our group is my priority, no matter their personal strengths and weaknesses, or career goals.
- **I will be available for regular meetings and informal discussions.** I often work with my office door closed to limit distractions, but this is not to be a barrier to lab members. If you need to speak with me or ask me a question, please come to my office, message me or find me. If I am too busy at that time I will tell you and set a later time to speak. For regular meetings it is best to email me so that we can organize a time to meet.
- **I will help you navigate your program of study.** As you will note below, you are responsible for keeping up with deadlines and being knowledgeable about requirements for your specific program. However, I am available to help you with any issues, advise on appropriate coursework, and select committee members for your thesis panel and exams.
- **I will discuss data ownership and authorship policies regarding papers with you.** These issues can create unnecessary conflict within the lab and among collaborators. It is important that we communicate openly and regularly about them. I will not compete you against other students and will endeavor to help you design your own independent research projects. I do expect you to collaborate with your lab mates and with outside labs, acknowledging their time and help and approach co-authorships openly.
- **I will be your advocate.** If you have a problem, come and see me. I will do my best to help you solve it.
- **I am committed to mentoring you, even after you leave my lab.** I am committed to your education and training while you are in my lab, and to advising and guiding your career development after you leave. I will provide honest letters of evaluation for you when you request them.
- **I will lead by example and facilitate your training in skills needed to be a successful scientist, such as oral and written communication skills, grant writing, lab management, mentoring, and scientific professionalism.** I will encourage you to seek opportunities in teaching, presentations, and writing. I will also encourage you to gain practice in mentoring undergraduate and fellow graduate students.
- **I will encourage you to attend scientific meetings and will make an effort to fund such activities.** I will not be able to cover all requests, but you can generally expect to attend one major international and national conference during your graduate degree. This is contingent on the conference and when you have sufficient material to present. There are numerous travel awards available for these conferences, and I will help you identify and apply for these.
- **I will strive to be supportive, equitable, accessible, encouraging and respectful.** I will try my best to understand your situation and mentor you accordingly. I am mindful that each student comes from a different background and has different personal goals. It will help if you keep me informed about your experiences and remember that a graduate degree is a job with very high expectations. I view my role as fostering your professional confidence and encouraging your critical thinking, skepticism, and creativity.

What I expect from you

As part of your training, I will help you set goals and hopefully achieve them. However, I cannot do the work for you. In general, I expect you to:

- Learn how to plan, design and conduct high quality scientific research
- Think deeply about your science and develop your own independent research project
- Learn how to document and present your scientific findings
- Take advantage of all professional development opportunities
- Be engaged within the lab and research group
- Treat your lab mates, lab funds and equipment with respect
- Obtain your degree
- Work hard

These expectations reflect the reality of working in science. We are very lucky to have exceptional support and education to pursue our scientific interests – very few people get a similar chance. This means I expect you to wholeheartedly take advantage of these opportunities and pursue your scientific careers.

Take ownership over your education experience

- **Acknowledge that you have the primary responsibility for the successful completion of your degree.** This includes commitment to your work in the classroom and laboratory.
- **Ensure that you meet regularly with me and provide with me updates on the progress and results of your activities and experiments.** While I am generally accessible by Slack, we may only meet face-to-face for a few hours a month. I expect you to prepare for these meetings, write things down and then act on the agreed action points going forward. Please also use this time to communicate new ideas that you have about your work and challenges that you are facing – I want to be involved as much as possible with your research and education.
- **Be knowledgeable of the policies, deadlines and requirements of your degree program, the school and the university.** Comply with all institutional policies, academic program milestones, laboratory practices and rules related to chemical and biohazard safety. This is not only a matter of safety, but also respect for others that you are pro-active in maintaining a clean and safe lab environment for others.
- **Actively cultivate your professional development.** Becoming a successful scientist involves much more than just doing research. As such I expect you to take full advantage of all resources and opportunities that are available to you at Monash University. This includes continued development as a teacher and mentor, attending regular seminar series, engaging in science outreach, attending conferences and workshops and pursuing professional development opportunities.

You will be a team player

- **Your lab mates are your best collaborators.** Day-to-day you will be working closely with your fellow lab mates and many will become some of your closest friends. They are your best contacts, collaborators and support in the lab. I expect you to work together and you to do your part in creating an environment of engagement and mutual respect.

- **Attend and actively participate in all group meetings, as well as seminars that are part of your educational program.** This means not only presenting your own work, but also providing support and constructive criticism to others in the lab. When you engage in critical feedback, remember we are talking about the ideas and not the person. When you receive critical feedback, remember that it is a privilege that someone has invested time and energy to think about your work and put the effort into improving it.
- **Be a good collaborator.** Collaborations are critical to our success. These include collaborations with your fellow lab mates, with other groups in our shared lab space and with external labs and companies. These collaborations are more than just publishing papers together. They demand effective and frequent communication, mutual respect, shared goals, trust and most importantly acknowledgement for the time and effort from all collaborators.
- **Clean up after your research.** Our lab is just one of many sharing a large communal lab space and you will often be using equipment or space that does not belong to us. I ask that you respect shared equipment and lab spaces, follow all rules and guidelines and to clean up after yourself. If something breaks, tell me right away so that we can arrange to fix or replace it. Don't panic and / or conceal broken equipment or mishaps. Mistakes happen. I am more concerned about your safety and how you deal with and follow up with accidents, rather than their occurrence.

You will develop strong research skills

- **Take advantage of your opportunity to work at a world-class university by developing and refining stellar research skills.** I expect that you will learn how to plan, design, and conduct high quality scientific research.
- **Prepare, draft, write and publish scientific articles that effectively present your work to others in the field.** The 'currency' in academic science is published papers, they drive a lot of what we do and because our lab is supported by taxpayer dollars we have an obligation to complete and disseminate our findings. I will push you to publish your research as you move through your training. Given the need to promote transparency and free access to science, I will operate an "opt-out" system for pre-publishing in bioRxiv. Undergraduate students will be expected to contribute as a co-author to at least one journal paper submission. Graduate students will be expected to be lead author on at least two journal paper submissions and contribute as a co-author to other submissions.
- **Challenge yourself by presenting your work at conferences and seminars as often and as early as you can.** Presenting your scientific research is a daunting but critically important skill in today's research environment. It is also an essential skill to develop for working outside of academia. I will work with you to improve all of your presentation skills. I expect you to take advantage of all opportunities to speak with an audience to the best of your abilities.
- **Keep up with the scientific literature.** Reading the literature is the only way to deeply learn the scientific field that we work in. I expect you to set aside time to do literature searches and read relevant papers every single week.
- **Maintain detailed, organize and accurate laboratory records.** Be aware that your notes, records and all tangible research data are my property as the lab head. When you leave the lab, I encourage you to take copies of your data with you. But one full set of all data must stay in the lab. To facilitate this, all lab members must use SciNote and organize accompanying data files in dropbox in an organized manner.

You will communicate clearly

- **Remember that all of us are ‘new’ at various points in our careers.** If you feel uncertain, overwhelmed, or want additional support, please overtly ask for it.
- **Let me know the style of communication or schedule of meetings that you prefer.** If there is something about my mentoring style that is proving difficult for you, please tell me so that you give me an opportunity to find an approach that works for you. Do not cancel meetings with me if you feel that you have not made adequate progress on your research; these might be the most critical times to meet with a mentor.
- **Be prompt.** Respond promptly (in most cases within 48 hours) to emails or Slack messages from anyone in our lab group. Show up on time and be prepared for meetings. This is a matter of respect for other people’s time. If you need more time for any reason, please let the person know and when they can expect a response.
- **Discuss policies on work hours, sick leave and vacation with me directly.** Consult with me and notify fellow lab members in advance of any planned absences. Graduate students can expect to work an average of 50 hours per week, this will include work in the lab and in the office or at home. All travel plans, even during major holidays, must be approved by me before any firm plans are made. I believe that work-life balance and vacation time are essential for creative thinking and good health and will encourage you to take vacations. Be aware, however, that graduate school and scientific research is demanding and there will be times – especially early in your training – when more effort will need to be devoted to work and it may not be ideal to schedule time away.
- **Discuss policies on authorship and attendance at conferences with me before beginning any projects to ensure that we agree.** I expect you to submit relevant research results to me in a timely manner. Barring unusual circumstances, it is my policy that students are first-author on all work for which they took the lead on data collection and writing of the manuscript. In most cases, I will be last/senior author. Discussions about the responsibility for being corresponding author will occur on a case-by-case basis.
- **Help other students with their projects and mentor/train other students.** I expect you to help your lab mates as much as possible. I may not always be available and your lab mates are your next best resource. Mentoring is a valuable experience and you should take every opportunity to assist other students when possible. If you wish to add other students as co-authors to your papers, please discuss this with me early and before discussing the situation with the potential co-authors.
- **Attending conferences.** I expect you to represent our lab in a professional manner. I expect you to choose your conferences carefully, reflect on and prepare your goals before you leave and reflect on your experiences after you return. I expect you to apply for an oral presentation, attend the scientific sessions and participate in the conference activities during the time you are there. Upon returning to the lab, I expect you to report back to the group on scientific highlights and how these might impact the research of any/all lab members.