

The Miller Lab

Mentor-mentee Compact for Graduate Students

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We conduct research on the evolution of insects, focused on their behavior, ecology, biomechanics, and sexual selection. Our shared goal is to conduct rigorous science that significantly advances the field through new discoveries. We do this while working hard, having fun, and taking care of each other. Our work and how we go about our work makes a positive contribution to this world. Our research team is generally composed of postdoctoral researchers, graduate students, undergraduate researchers, research staff, and the PI – all important members of our lab. When one member of the lab succeeds, we all succeed. One of our core values is to be a team that helps and supports each other. I welcome your communication about how we can all work together help you thrive in graduate school.

As a professor, I am expected to write grants, write papers, and conduct research that contributes to science, the academic community, and society. I have a myriad of other responsibilities including service and teaching for professional organizations and the University of Florida. Thus, I am quite busy, often busier than I'd like to be! It is crucial for me that lab members respect my time, and in turn, I intend to respect yours. If you use your time efficiently and creatively, you will be advancing the scientific body of knowledge, and you will boost the success of the entire research team. We are in this together! Our ultimate professional goal is to share exciting work with the scientific community by writing and publishing papers in scientific journals and by presenting at conferences.

EXPECTATIONS - For our group to function effectively, I will expect each of you to:

Be a team player – This means being respectful of the workspace and efforts of everyone in the lab. You are expected to participate in our lab meetings and to support others in the lab through shared insights. Everyone has a set of lab jobs, and efforts will be taken to distribute these equally. You are expected to communicate with the PI or lab manager if your job becomes too onerous or you wish to try a different task. Lab jobs might include (for example) taking care of the lab truck, filling out space allocation reports, purchasing lab supplies, helping everyone with travel paperwork, or organizing lab clean-up activities. You are expected to do your part to keep the lab functioning. There are times when funding, equipment, or facilities will be stretched thin; I expect we will do our best to make sure everyone is accommodated.

This lab has deep roots. Former members of the lab are part of our academic family and are often thrilled to be able to connect to their new lab “siblings”. They are eager for you to reach out! An important (and fun!) part of success in science is connecting and being connected, sharing knowledge, skills, advice, and joy. I encourage you to build your network early and to have current and former lab members be a part of the foundation of your success. And, then in the future, it's a wonderful experience to be able to pass it forward. Reflect on what you needed when you started, and then provide that help to someone else who wants it. We have a strong culture of collaboration and teamwork in this lab, stronger than many research groups.

Develop strong research skills – One of the true advantages of working at a world-class university is the chance to develop strong research skills. I expect that everyone will learn how to plan, design, and conduct high quality scientific research. You will all be given the chance to present your work at meetings and conferences, and you will be challenged to prepare scientific articles that effectively present your work to others in the field. You will join at least one scientific organization and keep up with the literature so that you can have a hand in guiding your own research. The ‘currency’ of a campus such as this is published papers, they are the engine that drives a lot of what we do. You are expected to publish early and often. Papers will be published as you move through your degree program, not only at the end. At the beginning, preparing manuscripts for publication will be a joint effort (I may write (or rewrite) as much of the article as you do); as you move towards the end of your program, you will be expected to take a lead role in authoring scientific papers. There will be times when you will be asked to work collaboratively within the lab or with other scientists; similarly, there will be times that you mentor or train undergraduates or new graduate students. Working collaboratively is an important part of science and an important part of your training. Practically, it will often lead to greater research productivity and the mastering of new skills. It is essential for “passing the torch” to new researchers and keeping science going.

Work to meet deadlines – I truly believe we have an amazing opportunity when we do science – we are some of the luckiest people in the world. We decide what is worth investigating, we have the opportunity to convince other scientists

and members of society that our work is valuable, and we funnel our energies to making new discoveries. But the inability to meet deadlines often plagues those who do scientific research, preventing many from achieving their dreams. Thus, we will work together to develop a culture of accountability. This starts with you. Everyone is expected to work their best to meet/manage deadlines. We will establish goals, a timeline, and deadlines at the beginning of each term. For graduate students, there must be a balance between time spent in class and time spent on research, remembering that number of publications will get you much further than the best grades at this stage. I expect everyone to work 40 hours/week of efficient, focused labor, and this includes duties on your research and teaching assistantship. The more hours you can devote to your research, the better. I do believe that if you work smart without distractions, 40 hours/week is sufficient for great success. If you are finding yourself to be distracted when you wish to be working, there are many workshops, tools, and mental health resources available on this campus and to the scientific community at large to help you. All travel plans, especially at the major holidays (e.g., Thanksgiving, Christmas), should be discussed well in advance with the PI before any plans are made. Our research organisms do not operate on human schedules! So, we need to work around the needs of our insects and the needs of ongoing experiments. We are a team, and so we need to operate as one. Your travel plans might need to be adjusted to allow research to continue smoothly and without problems. I hope that when it is possible for you, that you will help step in and help your fellow labmates so that they can take vacation time.

Communicate clearly – Everyone is new to a process/procedure at some point in their career. Questions will be gladly addressed up front. Everyone is expected to respond promptly to emails from anyone in the group (within 3 days not including vacation days), to show up on-time for meetings, and to be prepared to take notes. If you miss meetings or do not show progress, especially if you do not communicate with me about the reasons, we will discuss whether it would be best for you to take a leave of absence from graduate school or leave the program.

More on what you can expect from me:

1. I hope to inspire you, foster excitement for your work, help you find novel research directions, and share the joy of scientific research with you. Let's remember why we are here.
2. I will make myself available to talk about your project and progress on a regular basis. Depending upon the demands on my time and your needs, I can meet every week or every other week during the fall and spring semesters. In the summer we will meet less frequently. I hope we will make the most of our time together. Send me an agenda 24 to 48 hours in advance with a list of what you find important to discuss, ranked from most important to least important. Research questions should be listed before logistics, classes, and teaching because success in research is of #1 importance for your future success, whatever your career goals. What you choose to discuss during these meetings is an important decision that you must make, and it will influence your success.
3. Your achievements are important to me, and you should consider me your advocate. If you're having a problem, please come see me and I will do my best to help you solve it. I try to maintain judgement-free zones, and my goal is to make sure you feel safe and comfortable while you are here. Even after you move on from the group, I will continue to provide you with letters, references, access to my professional network, etc. for as long as you need it. Whether you stay in academia, move to industry or policy, etc. is not my decision, and I will fully support you in whatever career path you take.
4. As part of ensuring your success, I will help you learn how to present your work by writing articles and attending conferences. I will expect to work with you on writing outlines and drafts, revising, and polishing the final product. I will take you through the peer review process as both an author and a reviewer where possible. We typically attend at least one national or international conference per year as a lab group. If grant funds are available, I will contribute at least \$500 towards your travel once you are ready to present our joint research findings, and the University of Florida has many travel awards for students presenting at conference. Our lab team will work together to help you prepare your poster or oral presentation.

This may be the first time in your educational career that there are direct responsibilities in addition to learning. As either research or teaching assistants, students are being paid to be part of a research team and thus have responsibilities to the group. Being a graduate student is a hybrid position of being a student and being an employee!

Expectations for you:

1. I will help you build foundational knowledge and set goals for your project(s), but I cannot do the work for you. I am your advisor – I provide advice. I am also your supervisor. You are the one ultimately making your project a success or failure. A major goal of mine is to foster your independence, which means sometimes that you may want more from me than I give. I expect you to take initiative in reading, writing, and performing experiments while you are still establishing yourself and getting familiar with your project. You should set short- and medium-term goals and make steady progress towards them. I can help you with this. As you progress through the program, I expect you to reach a point where you can independently plan, design, and conduct high quality scientific research. Set a schedule that works for you, working towards your goals daily at pre-determined times each day. Your best progress will be made when you are steady, focused, and mindful of what you are doing. Plan to physically work in the lab around other lab members at least three times/week so that you can build your community and help one another.
2. I trust you to be responsible with your time, so I'm not going to micromanage you. I will provide you time management ideas or tools if you'd like. I consider research to be project-based rather than an hourly position. If you are making progress towards your goals and reaching milestones, please take whatever mental health or vacation days you need (though, communicate with me and your lab mates about these dates). If you are sick, you should work from home, read papers, etc. rather than coming in. To stay on track, you may wish to come in on a weekend to compensate for missed days or extend your daily time in lab another week. Ultimately, it is your decision how to best work in a way that is healthy for you and that still keeps you on track.
3. You must maintain accurate, detailed records of all experiments you conduct. A laboratory notebook will be provided to you if you do not have one. You may keep your laboratory notebook digitally, as long as the file is available on Teams at all times to lab members. Experiments should be documented in the order in which they were performed, and each completed notebook should have a table of contents so experiments and results can be found easily (this is also very helpful when writing papers!). All data collected belongs to the grant agency and UF, so notebooks stay in the lab when the researcher leaves, and notes should be accessible to everyone. If you need to bring your notebook home so you can reference it for writing, be sure it returns to the lab as soon as possible. If you wish to bring your notebook with you when you move on, you are free to make copies of anything to take with you, but the original must stay at the University. I encourage you also to have a second research notebook that is for brainstorming ideas and methods, almost like a professional journal where you can think freely. You do not need to share this brainstorming journal with anyone.
4. All your digitized data must be always updated and available on the UF computer network (Teams).
5. Your stored samples (dry, in ethanol, in the freezer, or in other cold storage) will be discarded one year after you have completed your paid work or graduate student assistantship. You will not necessarily receive notice; it is up to you to remember to arrange for your samples to be shipped to you. You should arrange for disposal or transport *before* you leave the lab so that the task does not fall upon others.
6. Once you leave the lab, you have one year to finish up any last papers that you are leading, receive and incorporate feedback from all authors, and submit them to a mutually agreed-upon journal. If you are not able to finish up papers in one year, others may step in to finish them up. Our results are frequently important to science, and it can be unethical to sit on them for too long and not get them out to the scientific community. You will remain an author if we take over a publication. Whether you will remain the first author depends upon how much work is required to finish up the paper. If another student or postdoc finishes up the paper, they frequently will become first author.
7. My feedback and approval are required on all papers as well as conference presentations. This is the case for *all* authors on your papers and presentations. Their names are on the work, so they must understand and approve the work. You must give them adequate notice so they can find the time to provide feedback and decide if they want their name on the work or removed.

8. Please take advantage of professional development opportunities. Attend at least one department (or online) research seminar each week. Be engaged in seminars and during conferences and be prepared to present your work to the community. Find research you are excited about! Read papers from other groups and in other areas! Part of being a scientist is being able to think outside your own specific question or system, or to apply/incorporate your knowledge in other areas.
9. Be honest, ethical, and respectful. Treat other members of the lab with respect. Do not distract, harass, or insult anybody. We are here, first and foremost, to reach our goals, to help each other, and advance our careers. Treat the lab equipment, supplies, and data quality with respect! Treat your insects with respect. When done with an experiment, make sure to not leave the insects to starve or desiccate. Freezing insects we do not need is much more humane than abandoning them.
10. Pay attention to the graduate student handbook and discuss scheduling proposal meetings, etc. with me in a timely manner. Discuss coursework with me in advance but signing up on time and knowing the requirements is your responsibility. I see myself as your research advisor and much less so as your academic advisor. Talk to your fellow students to get ideas on the best courses to take.
11. Be strategic with your efforts. Many graduate students put in long hours, but don't do so in the most effective way. Set a time aside each week to evaluate the schedule you set, asking, "should I be spending my time this way? Is there a better way for me to invest my efforts?" I do not encourage more frequent evaluation of how you spend your time (like minute by minute!) or it causes undue anxiety. Set a schedule each week and stick to it. Reevaluate your schedule each week until you start to better understand what you need and how much time is required for each task. Make sure to schedule time to do things you enjoy every day. Remember what you love about science and make sure you are returning to what you love.
12. Attendance at our lab meeting is mandatory for graduate students and postdoctoral researchers.
13. The computers in the lab have been provided for your use by the University. Remember, these are for lab business and not for personal use.
14. Keep phone/online conversations at your desk to a minimum and use ear buds or headphones when listening to music while others are in the lab, as it may be distracting. Similarly, please be aware that people are working, so provide space to anyone who is in the middle of an intensive experiment, working on presentations or papers, etc. We may ask you to quiet down or take your conversation elsewhere. Noise can be quite disruptive to some people, so please don't take it personally if you are asked to be quiet.
15. We do have serious expectations, and we are all self-disciplined. That said, we are here because we love what we do. We are so fortunate to have study and work that's focused on understanding this amazing world we live in. It is my sincere hope that you deeply enjoy your time in the lab and at UF and that you experience amazing personal growth as well.
16. Take care of yourself! Watch bugs, walk in nature, make sure to visit the beach, to swim in the springs of North-Central Florida, and make the most of your life. Doing fun research is part of this – but it certainly isn't all of it. Find your work-life balance or harmony. Pay attention to what motivates and inspires you and give it your attention.