A primary goal of the Wickman lab is to conduct impactful research that sheds light on the mechanisms underlying organ physiology and behavior. A parallel goal is to empower the next generation of scientists with the skills and stamina to tackle and solve difficult problems that our society faces. What follows is an attempt to articulate general expectations for working in the Wickman lab, and to help ensure that you make the most of the available resources and this unique experience. It is important to keep in mind that all members of the lab have different backgrounds and long-term goals, and the expectations of this lab might be different than neighboring labs at the University of Minnesota, labs you worked in previously, or labs that you might direct someday. These expectations are in place to help cultivate the success of all trainees in this environment and to ensure that both the trainee and lab have the greatest chance for long-term success and making a positive impact on the field.

1. **What are the key expectations of personnel in the Wickman lab?** The most important expectation, regardless of your position or career stage, is that you “own” your project(s). “Owning” your project means that you (the Project Director) are engaging in independent reading of the relevant scientific literature, working hard at the bench to advance the project, and bringing new findings and concerns to the attention of the group. It should also mean that you are focused on feasible publication strategies (“real-time writing”), that you pursue solutions to problems that will inevitably arise, and that you are continually evaluating the best ways to develop the project to its fullest potential. Related to the latter consideration, Project Directors are expected to identify and cultivate internal/external collaborative opportunities and be aware of service core resources and how those might benefit their research project(s).

**GRADUATE STUDENTS**

In order to earn an MS or PhD degree, you need to complete your graduate program-specific requirements in a satisfactory and timely manner. It is your responsibility to understand the specific requirements and benchmarks of your graduate program. Dr. Wickman approaches each new graduate student trainee assuming a 5-year timeline for completion of their PhD. Some typical training-stage benchmarks and expectations include the following:

**As a rotation student**
- Work hard to understand the context and significance of the research area you explore
- Gain experience with some of the standard research approaches used by the lab
- **Proactively** engage with all members of the lab to understand what they do and why they do it
- Present a summary of your rotation experience at the end of the rotation

**As a 1st-year student**
- Contribute to an ongoing research project in the lab
- Work with Dr. Wickman to define a research area/project at the intersection of your interests and lab needs; please be prepared that this process can be challenging and may span many months, particularly if you are pursuing a new research direction
- Dive into the literature to understand the context and significance your research project(s)
- Gain experience with standard research approaches used by the lab
- **Proactively** engage with all members of the lab to understand what they do and why they do it
- Perform will in your coursework
- Be an exceptional labmate and make a significant contribution to “lab chores”

**As a 2nd-year student**
- Begin taking ownership of your research project(s)
- Develop proficiency with key experimental approaches and develop/practice trouble-shooting skills
- Consider submission of a research proposal to a funding agency related to your thesis research
- Dive into the literature to understand the context and significance your research project(s)
- **Proactively** engage with all members of the lab to understand what they do and why they do it
- Be an exceptional labmate and make a significant contribution to “lab chores”

**As a 3rd- and 4th-year student**
- Consider submission of a research proposal to a funding agency related to your thesis research
- Focus on publishing the results of your thesis research (write in “real time”), and perhaps writing a review
- Develop training/mentorship skills with new graduate students, summer students, undergraduates, etc.
- Begin developing a scientific network via conference attendance/participation
- Dive into the literature to understand the context and significance your research project(s)
- Proactively engage with all members of the lab to understand what they do and why they do it
- Be an exceptional labmate and make a significant contribution to "lab chores"

As a 5th-year student and beyond, and before transitioning to your next adventure
Write your thesis
- Develop training/mentorship skills with new graduate students, summer students, undergraduates, etc.
- Focus on completing/publishing stories and wrapping up datasets
- Organize your files/reagents so that effort is not wasted and the "wheel" does not have to be reinvented
- Identify and take the next step in your career progression
- Continue developing a scientific network via conference attendance/participation
- Be an exceptional labmate and make a significant contribution to "lab chores"

POSTDOCTORAL TRAINEES
The main goal of postdoctoral training is to help interested scientists develop independence with the design, execution, and dissemination of impactful research, with limited supervision. Postdoctoral trainees are expected to work hard to develop their research projects, design their experiments, write grant applications and manuscripts, and present their research at scientific meetings. Typically, the postdoctoral trainee will gain new experience with techniques available in the lab, while also giving back the benefit of their prior training to the lab. This give-and-take is a "win-win" for the trainee and lab, and is conducive to high-quality, interdisciplinary research projects. Postdoctoral training also allows scientists the opportunity to hone skills related to mentorship and supervision; this is a particularly important element of postdoctoral training in the Wickman lab. Postdoctoral trainees are expected to be generous with their knowledge and time, helping more junior members of the lab reach their full potential.

2. What can I expect of Dr. Wickman as a mentor? Dr. Wickman hopes to provide a safe and rich training environment within which early career scientists can develop their interest and skills in research, and for his trainees to achieve and refine technical and soft skills that they will need to succeed in whatever endeavor they entertain in the future. Dr. Wickman has significant administrative (e.g., Department Head) and discipline-related service duties (e.g., NIH study section member, Editor), as well as a relatively high teaching load. Thus, while he does not travel much, he is often occupied with responsibilities that limit his ability to focus on your daily needs. Accordingly, he appreciates any effort made by lab personnel to work independently, to engage with colleagues and the research community to enrich their projects and solve problems, and to put together first drafts of manuscripts, fellowship applications, and written preliminary exams.

As a graduate student, you can expect the following from Dr. Wickman:
- He will schedule 1-on-1 meetings with you at least every other week during the academic year
- He will try to accommodate ad hoc meetings on an as-needed basis
- He will work with you to identify a research project that suits the needs of you and the lab
- He will be a strong advocate for you during your preliminary exam and thesis defense
- He will serve as a resource as you work to solve problems at "the bench"
- He will try to help you navigate difficulties and challenges during graduate school
- He will lend assistance with conflict management, if necessary
- He will support your attendance at a scientific meeting each year, provided you present data
- He will provide strong letters of recommendation for you throughout your entire career progression

As a postdoctoral trainee, you can expect the following from Dr. Wickman:
- He will schedule 1-on-1 meetings with you every other week
- He will try to accommodate ad hoc meetings on an as-needed basis
- He will work with you to identify a research project that suits the needs of you and the lab
- He will allow you to develop projects and interests of your own, within reason
- He will serve as a resource as you work to solve problems at "the bench"
- He will provide opportunities to gain mentorship and leadership experience, if so desired
- He will provide opportunities for you to assist with manuscript review
- He will lend assistance with conflict management, if necessary
- He will support your attendance at a scientific meeting each year, provided you present data
3. How and when should I communicate with Dr. Wickman? Dr. Wickman is available any day of the week via email, Slack, or text in the evening before 11:00 pm or after 6:00 am. He will try to reply to email/Slack questions and requests in a timely fashion. Likewise, you are expected to reply in a timely manner and to communicate openly with Dr. Wickman when prompted. Dr. Wickman strongly prefers that you contact him as normal even on weekends or holidays, or when he is traveling for work, or when he is on vacation. This is particularly important if there is a pressing need or an important or interesting project-related development. You may have a different outlook on work-life balance and different work-related communication boundaries than Dr. Wickman; he will try to respect your outlook, but he asks that you respect his desire to be informed in real time of important or interesting lab- or project-related developments. Occasionally, you will receive emails or Slack messages from Dr. Wickman outside of your preferred contact time windows. You are not expected to respond to such outreach unless it is an emergency situation. Desired forms of communication (in order of preference) are as follows:
   a. in-person: 3-112 NHH
   b. Slack
   c. email: wickm002@umn.edu
   d. Zoom: ad hoc meetings as needed
   e. cell phone

4. How much am I expected to work in the lab? Productivity is the ultimate metric for success in the lab, and hard work/persistence are almost always required ingredients for that success. Graduate students and postdocs should recognize that a rigid “Monday-Friday/9:00am-5:00pm/40-hour work-week” approach to science will likely be inadequate to move projects forward efficiently. With the important caveats that everyone and every project is different and that some people are more organized/efficient than others - the demands at the bench, staying on top of the literature, thinking strategically about your project(s), and reviewing/writing manuscripts and fellowship applications will likely occupy more than 40 hours per week. When working to finish a paper, prepare for a seminar, or meet a fellowship application deadline, you will likely exceed this benchmark. Please note that if you believe that you can work more efficiently at home, or in the library, or in a coffee shop, you are encouraged to do so. In this event, please communicate with your labmates (and perhaps Dr. Wickman) as needed so that it is clear where you are and how best to get in touch with you.

5. What is the lab policy on vacations? Vacations are encouraged by Dr. Wickman. Postdoctoral trainees and graduate students are expected to make arrangements as needed with co-workers to ensure that any general lab responsibilities are met during their absence, or to ensure that a project can progress in their absence. All University of Minnesota holidays will be observed by default, but it is likely that work will be unavoidable on a subset of holidays over the course of one’s tenure in the lab. An unusual amount of vacation time taken in any given year may prompt a dialogue with Dr. Wickman, particularly if there is not a compensatory commitment to working outside the limits of a normal business day/week, or if there are concerns about productivity and progress.

6. Can I plan my work schedule around expected and unexpected life events? One of the best perks of a career in science is scheduling flexibility. Doctor, dentist, haircuts, pet appointments, and other personal excursions are expected events, and there is an understanding that these events may need to happen during normal working hours. Unpredictable events (e.g., car trouble, illness, etc.) will also occur. Permission is not required for absences related to these types of expected and unexpected occurrences. If you will be absent for large portions of a day, however, please try to notify Dr. Wickman and communicate with labmates as needed. Please note that not showing up to the lab during the work-week and not communicating your absences (expected or unexpected) can create confusion or concern among lab members, and is not acceptable professional behavior.

7. How many papers should I publish as a graduate student or postdoc? To be competitive in the job market (academic, industry, government/regulatory), postdoctoral scholars should strive for an average rate of publication of one peer-reviewed 1st-author paper per year. PhD students should strive to submit or publish two or more 1st-author manuscripts while working toward their degree. These guidelines do not change depending on long-term career goals, but there are certainly exceptions and mitigating circumstances that impact this metric of productivity. Notably, the scope of a manuscript and journal targeting strategy will certainly impact publication frequency.

8. How are authorship decisions for scientific manuscripts made? Once you join the lab, you will work with Dr. Wickman to identify a project that you will (ultimately) direct. A key goal in discussions with Dr. Wickman is to identify
a project that suits your research interests and gives you an opportunity to learn distinct types of state-of-the-art research approaches. In some cases, this is a project that was “handed off” by a previous member of the lab. In other cases, it is an idea that has been awaiting the right person to move it forward. When sufficient data are acquired that permit the dissemination of a new and interesting story, the project director will be responsible for generating a complete draft of the manuscript. This person is the first author of the manuscript. Conducting impactful science today typically requires teamwork. At some point in your training, you will likely be asked to contribute your expertise and/or hands-on effort to support the project of a colleague in the lab. In this case, you will be a co-author, and your position on the author list will reflect the relative contribution to the project, as ascertained by the first author and Dr. Wickman. It is not uncommon for multiple individuals to make significant contributions to a particular project, and these instances can generate stress and negative feelings among co-workers when the time comes to publish. While the goal is to avoid these types of circumstances, it can be difficult to predict how a project will evolve, and how the roster of contributing members to a project will evolve, over the timespan of a research project that may span several years. In instances where multiple individuals might reasonably lay claim to first authorship, Dr. Wickman will do his best to work to a conclusion that balances the needs of the individuals and lab. Among the options in these instances are co-first authorship designations and splitting the story into multiple manuscripts. If you sense that there might be an authorship issue related to a project that you are working on, it is recommended that you initiate conversations with Dr. Wickman as early in the arc of the project as possible.

9. Will I be able to present my work at scientific meetings/conferences? Dr. Wickman considers attendance and participation at conferences to be an important part of the training experience. The default approach is to send each eligible graduate student and postdoc in the lab to an appropriate scientific conference each calendar year. To be eligible, you need to have pertinent new data to present at the meeting. Additional travel to conferences may be granted on a case-by-case basis for those who are unusually productive or if attendance would meet a strategic need for the lab. A commitment on the part of attendees to attempt to secure local funding or travel awards is expected, as conference attendance can be quite expensive. While Dr. Wickman can provide advice as to meetings to attend, you are strongly encouraged to look for meetings in your research area that will be the best fit for you and the lab.

10. Will we meet regularly as a research group? The Wickman lab meets as a group on a weekly basis during the academic year. Attendance at group lab meetings is expected for graduate students and postdocs, and everyone is expected to actively participate in the discussion. Respect for the work of other lab members and their effort is expected, although all lab members should realize that constructive criticism is necessary for success in science and should not take such comments personally. The group meetings afford a good forum for practicing both the giving and receiving of helpful constructive feedback. Please note that you are not helping your colleagues prepare for the challenges of their future jobs/responsibilities by refraining from asking fair but difficult questions in an effort to be “nice”. Moreover, you are not helping yourself or the lab if you have questions about a project, technique, or concept and you fail to seek answers to those questions.

11. Will I have individual meetings with Dr. Wickman? One-on-one meetings will be scheduled with Dr. Wickman every one or two weeks, depending on your stage of training. You are expected to come prepared to discuss important issues related to your progress and project. Keep in mind that the direction of research projects reflects the combined input of Dr. Wickman and project directors, with both parties continually assessing progress, understanding the limitations of proposed approaches, and considering opportunities for doing things better. While these topics are optimal for one-on-one meetings, other discussion points during this time are yours to decide. Informal/spontaneous meetings to share results are also expected regularly; these informal meetings show “ownership” of, and interest in, your project. If you are concerned about any aspect of your project, please feel free to talk to Dr. Wickman at any time. It is important to note that no PI has all the answers to all of the questions that will arise over the course of a research project, nor can anyone accurately predict how a research project spanning months-to-years will evolve. As such, a course of action set in motion days, weeks, or months ago may be rendered sub-optimal or even fatally flawed in retrospect. This is a challenging and recurring issue in science, and it is important that there is recognition that sometimes, difficult decisions related to staying or changing course on a project need to be made. Open lines of communication will help you navigate this important issue.

12. Am I expected to attend departmental events and seminars? Graduate students are expected to comply with the requirements of their graduate program regarding attendance and participation at seminars, retreats, or other extracurricular functions. Postdoctoral trainees are encouraged to attend relevant Department of Pharmacology seminars and engage with seminar speakers, as appropriate. There are many opportunities for seminars and enrichment at
the University of Minnesota. In engaging with these opportunities, please try to find a balance that suits both you and the lab.

13. Will I be expected to write papers? Absolutely. Scientific writing is a critical skill required in most science-related professions, and it requires practice. The 1st author of a particular manuscript is expected to work with his/her co-authors to complete the initial draft of a manuscript (including figures, supplemental materials, letter to the editor, etc). It is also the 1st author’s responsibility to edit the manuscript based on feedback from co-authors, and to organize and prepare the critique response following manuscript review. As the quality of our manuscripts reflects on the lab, you can and should expect detailed feedback on your writing from Dr. Wickman; this can be a difficult process, and requires a “thick skin”. While the primary responsibility for preparing and publishing a manuscript resides with the 1st author, all co-authors are expected to provide detailed, substantive, and timely feedback on manuscripts. The Wickman lab will adhere to authorship guidelines in place at most biomedical journals; all co-authors are expected to work hard to meaningfully improve a manuscript prior to submission. Failure to do so shows a lack of engagement with the project and is potential grounds for exclusion from the author list, even if the individual contributed some technical support to the project. All members of the lab are expected to participate in the occasional review of manuscripts prepared by lab colleagues.

14. Am I expected to secure my own research funding? Grant/fellowship-writing is an important skill and one that all trainees in the lab should expect to experience over the course of their training. While not everyone is eligible for all types of funding, all lab members are expected to work with Dr. Wickman to identify opportunities they can pursue, and then to put together high-quality and competitive applications. When students and postdoctoral trainees secure their own support, it frees up funds that the lab can use to recruit other trainees and technical staff, purchase equipment that can enhance lab efficiency or open up new research opportunities and support travel to scientific conferences.

15. What computing and software resources will be available to me? When you join the lab, a computer (PC) will be made available to you, as well as software packages required for work (e.g., Microsoft Word/Excel/PowerPoint, Prism (data analysis and figure generation), EndNote (citation manager), and Canvas (Figures)).

16. What are the expectations regarding lab notebooks and data management? Keeping a detailed lab notebook is important for the scientist and lab. While this resource may prove vital in the event an external agency requests access to our raw data, the more realistic benefit of a well-maintained lab notebook is that it can minimize wasted lab effort and accelerate the training times for new lab staff. As per standard research lab practice, lab notebooks should never leave the lab. Please note that while Dr. Wickman does not routinely check the content of lab notebooks, he reserves the right to so - particularly if there is a sense that difficulties encountered in the lab relate to someone’s inability to clearly document their efforts. To minimize the potential for these types of problems, and to facilitate the training of new lab members, all members of the lab are asked to contribute to our evolving series of protocol and procedures, currently housed in Google Drive/doc format. With respect to management of electronic data, each lab member is responsible for archiving their files in an intelligible way, and in a manner such that a single computer or drive failure does not result in permanent data loss. All electronic data should be stored and backed up in two different places (appropriate location depending on size and type of file) to ensure the long-term viability of the data.

17. What is the lab philosophy about intellectual property? Science involves the repeated generation and testing of ideas. Those ideas can arise from your independent thinking, your reading of other’s work, your discussions with Dr. Wickman or labmates, discussions during lab meetings, and/or your participation/attendance at seminars or conferences. Sometimes it is not clear where an idea came from, or the idea morphs over time to a point that it is no longer obvious who “owns it”. Dr. Wickman will periodically use ideas and/or data that you generated, contributed to, or helped to refine as part of his/their grant applications. We are a team, and a key team goal is to help secure long-term funding for the group. This is a two-way street - you are encouraged to use ideas generated by Dr. Wickman to prepare your manuscripts, grant/fellowship applications, posters, and oral presentations. In these types of cases, it is always important to do our best to properly and accurately attribute effort and ideas to specific individuals, as appropriate. Members of the lab who seek to pursue lines of investigation that were conceived of or initiated in the Wickman lab, as part of their next research position (e.g., postdoctoral training or faculty position), are encouraged to engage with Dr. Wickman, so that a clear understanding is reached regarding future pursuits that prevents hard feelings or unhealthy competition. As a general philosophy, Dr. Wickman wants all of his trainees to be successful in their careers and has no interest in competing with his trainees in areas of mutual interest. In addition, you will be able to take any materials that you generate as part of your work in the lab with you on your next adventure.