

KEVIN WICKMAN

Advising statement

My goal is to conduct impactful research that sheds light on the cellular and molecular mechanisms underlying organ physiology and behavior. A parallel goal is to cultivate the growth and success of all members of this environment, and to ensure that both the trainee and lab have the greatest chance for long-term success in their chosen field. What follows is an attempt to shed some light on the culture and expectations within my lab. Please note that 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. I have a growth mindset and as such, I am very open to new ideas and suggestions that can help make ours a more productive and fulfilling work environment - your input is welcome!

1. What I will expect of you. Professional behavior on the part of all lab members is critical to our ability to conduct impactful research and to create a culture that attracts other scientists to the lab for training. As such, all common sense expectations related to professional behavior apply in this lab. In practice, this means that you are expected to treat yourself and co-workers with respect, to be honest and open throughout your time in the lab, to take pride in and facilitate the success of your co-workers, and to help make the lab a better place than it was when you joined.

All group members, regardless of their stage of training, should aspire to making a positive impact on science. Once you join the lab, you will work with me and other team members to identify a project that you will contribute to and perhaps (ultimately) direct. A key goal in these discussions is to identify a project that appeals to you and aligns with lab interests (funded or investigational). 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. Once a project is identified, it is important that you begin working towards “ownership” of the project. “Owning” your effort means that you work to understand the relevant background and context, try hard to master technical skills needed to advance the project, and bring new findings and concerns to the attention of the group. Over time, it also means that you will become better at identifying and solving problems that inevitably arise, and that you will look for opportunities to develop the project to its fullest potential.

Current lab members play a critical role in recruiting new members to the lab. As such, your help in generating enthusiasm for our group is appreciated. Relatedly, the expectation is that everyone in the lab will raise issues or concerns as needed that - if addressed - could help improve the culture and efficiency of the group.

For students in a graduate degree program: It is your responsibility to understand the specific requirements and benchmarks of your program, and to complete your graduate program-specific requirements in a satisfactory and timely manner. I approach each new PhD student trainee assuming a 5-year timeline for completion of the PhD. With the important caveats that every student, project, and training experience is different, here are some common training stage-specific activities and expectations to consider:

As a rotation student

- Work 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

As a 1st- and 2nd-year PhD student

- Contribute to an ongoing research project in the lab
- Work with me and the group to define a research area/project at the intersection of your interests and lab needs; this process can be challenging and may span many months
- Gain experience with standard research approaches used by the lab; work toward proficiency with key experimental approaches and develop/practice trouble-shooting skills
- Proactively engage with all members of the lab to understand what they do and why they do it
- Read the literature to understand the context and significance your research project(s)
- Work with me to develop and Individualized Development Plan (IDP)
- Prepare a research proposal related to your thesis research; submission to a funding agency (external or internal) is strongly encouraged

As a 3rd-year PhD student and beyond

- Direct a research project(s) and work to publish the results of your thesis research
- Consider writing a review in the area of your thesis research

- Develop mentorship skills with new graduate students, summer students, undergraduates, etc.
- Enhance your scientific network via conference attendance/participation
- Stay on top of the literature and monitor developments in your field(s)
- Make a positive contribution to lab culture

- 2. What you can expect from me.** I will provide a safe training environment where you can develop your interest and skills in research, and where you can build and refine technical, professional, and interpersonal skills that you will need to succeed in whatever path you pursue in the future. I will likely not train you in lab techniques, but I will make sure that you benefit from an experienced mentor(s) so that you can develop the technical proficiency needed to start on or advance a project. Other things you can expect from me:

 - I will schedule 1-on-1 meetings with you at least every other week during the academic year
 - I will accommodate *ad hoc* meetings on an as-needed basis
 - I will work with you to identify a research project that suits the needs of you and the lab
 - I will be a strong advocate for you during your preliminary exam and thesis defense
 - I will serve as a resource as you work to solve problems at “the bench”
 - I will try to help you navigate difficulties and challenges during graduate school
 - I will lend assistance with conflict management, if necessary
 - I will support your attendance at 1 scientific meeting each year (beginning in Year 2), provided you present data
 - I will provide strong letters of recommendation for you throughout your entire career progression
- 3. Communication.** I am available any day of the week via email or Slack. I will reply to your questions and requests in a timely fashion, and I ask that you contact me even on weekends or holidays, or when I am traveling for work, or when I am on vacation. This is particularly important if there is a pressing need or an important or interesting project-related development. Occasionally, you will receive emails or Slack messages from me or your labmates outside of your preferred contact time windows. You are not expected to respond to such outreach unless it is an urgent or emergency situation. I prefer the following forms of communication (in order of preference):

 - a. in-person: 2-107 NHH
 - b. Slack: wickmanlab.slack.com
 - c. email: wickm002@umn.edu
 - d. Zoom: *ad hoc* meetings as needed
- 4. Work hours.** Upon joining the lab, your day-to-day schedule will depend on the availability of trainers/mentors. With independence comes greater flexibility in scheduling. Productivity is the ultimate metric for success in the lab, and hard work and persistence are almost always required ingredients for productivity. With the important caveats that everyone and every project is different and that some people are more organized/efficient than others - studying for classes, the demands at the bench, reading the literature, thinking about your project(s), writing manuscripts, and other activities make for a “full plate”. In addition, a rigid “Monday-Friday/9:00am-5:00pm” approach to science may be inadequate to move projects forward efficiently. 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.
- 5. Vacations.** Vacations are encouraged. All lab members are expected to make arrangements with co-workers to ensure that any general lab responsibilities are met during their absence, or to ensure that a team-based project can progress in their absence. An unusual amount of vacation time taken in any given year may prompt a dialogue with me, particularly if there are concerns about productivity and progress.
- 6. Expected and unexpected life events.** One of the best perks of a career in science is scheduling flexibility. Doctor and dentist appointments, haircuts, pet care, 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 communicate with labmates as needed. Please appreciate 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.
- 7. Individual meetings.** One-on-one meetings will be scheduled with me every 1-2 weeks, depending on your stage of training. You are expected to come prepared to discuss important issues related to your progress. While project

updates are key topics for these meetings, please feel free to bring questions or concerns to the table. Informal/spontaneous meetings to share results are also encouraged! It is worth noting that nobody has all of 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 in retrospect be suboptimal or fatally flawed. This is a challenging issue in science and sometimes, difficult decisions related to staying or changing course on a project need to be made. Whenever possible, strategic decisions related to a project will be made by all parties involved, given the best information available at the time.

- 8. Group meetings.** We meet as a group on a weekly basis during the academic year, and everyone is expected to actively participate in group discussions. Respect for the work of other lab members and their effort is a foundational expectation. That said, all lab members should realize that constructive feedback and introspection are necessary ingredients in professional growth. Group meetings afford a good forum for practicing both the giving and receiving of constructive feedback. You are not helping your colleagues prepare for the challenges of their future careers by refraining from asking questions in order to be “nice”. Moreover, you are not helping yourself or the lab if you have questions about a project or technique and you do not seek answers to those questions.
- 9. Computing and software resources.** When you join the lab, a computer will be made available to you, as well as typical software packages required for work (e.g., Microsoft Word/Excel/PowerPoint, Prism (data analysis and figure generation), EndNote (citation manager), and Canvas (Figures). If you are more comfortable or familiar with other software platforms, those purchases can be considered on a case-by-case basis. The main goal is to support your productivity and efficiency.
- 10. Lab notebooks and data management.** Keeping a lab notebook and accurate records are important for the scientist and lab. While these records may prove vital in the event an interested party requests access to our protocols and raw data, the more realistic benefit of well-maintained research records is that they can minimize wasted effort and accelerate the training times for new staff. Written records (e.g., lab notebooks) should never leave the lab. To facilitate the training of new lab members, all lab members are asked to contribute to our evolving series of protocols and procedures. 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 2 different places (appropriate location depending on size and type of file) to ensure the long-term viability of the data.
- 11. Fellowships and grants.** 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 me to try to identify opportunities they can pursue, and then to put together a high-quality proposal. When 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.
- 12. Publications.** Timely publication of research results is critical for the long-term viability of the lab. 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. The 1st author of a particular manuscript is expected to work with the 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 expect feedback on your writing from me. PhD students should strive to publish 2 or more 1st-author manuscripts while working toward their degree. This recommendation does not vary based on desired long-term career goals. Notably, the scope of a manuscript and journal targeting strategy will impact publication frequency and timeline.

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 me. While the primary responsibility for preparing and publishing a manuscript draft resides with the 1st author, all co-authors are expected to provide detailed, substantive, and timely feedback on manuscripts. Please note that members of the lab will be asked to participate in the occasional review of manuscripts prepared by lab colleagues, whether co-authorship is involved or not.

It is not uncommon for multiple individuals to make significant contributions to a particular project, and these instances can generate stress and concern when the time comes to publish. While the goal is to avoid these types of situations, 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 course of a research project that spans years. In instances where multiple individuals might reasonably lay claim to 1st authorship, I will do my best to work to a conclusion that balances the needs of the individuals and lab. Among the options in these instances are co-1st 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 me as early in the arc of the project as possible.

- 13. Scientific meetings/conferences.** Attendance and participation at conferences is an important part of the training experience. I will send each eligible member of the lab to an appropriate scientific conference each calendar year. To be eligible, you should have 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. While I can provide advice as to the best meetings to attend, you are encouraged to look for meetings in your specific research area that will be the best fit for you and the lab.
- 14. 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 me 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". I will periodically use ideas and/or data that you generated, contributed to, or helped to refine as part of my 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 me to prepare your manuscripts, grant/fellowship applications, posters, and oral presentations. 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 my lab, as part of their next research position (*e.g.*, postdoctoral training or faculty position), are encouraged to engage with me so that a clear understanding is reached regarding future pursuits that prevents negative feelings or unhealthy competition. As a general philosophy, I want all of my trainees to be successful in their careers and as such, you will be able to take any materials or reagents that you generate as part of your work in the lab with you on your next adventure.