

**Advising Statement
Carol A. Lange, PhD
University of Minnesota**

My mission as a PhD Thesis Advisor and graduate student or postdoctoral fellow mentor is to help my trainees reach their professional goals in a positive learning environment that embraces diversity and fosters creativity. During the graduate student or postdoctoral career path, my goal is to be a trainee advocate who supports and fosters the development of scientific and professional skills, including technical skills (benchwork, data collection and analysis), independent critical and creative thinking, a working knowledge of scientific history, context, and theory, scientific writing and oral presentation skills, time management including work/life balance, and the art of teamwork or collaboration. Each trainee begins their journey with a unique background, starting point, skillset, and specific research interest. My role is to help strengthen, expand, and enhance this base skillset while fostering creative research advances that will form a novel PhD thesis, body of work, and contribution to our field of study. The purpose of this Advising Statement is to clearly convey my expectations for a healthy mentor/mentee relationship as well as the shared responsibilities that ensure trainee success within my laboratory.

Research Goals

- General areas for potential research projects are discussed and broadly co-developed by the mentee and mentor after literature review and interactive discussions around scientific question, theoretical advance, clinical relevance, novelty, research approaches, models, and feasibility. In my lab, trainees typically initially select and co-design 1-3 related projects considered to have strong potential. As independent work progresses and projects grow, one “favorite” project typically takes off as a primary thesis or research project, while the others may recede entirely or become secondary or collaborative.
- Within each research project, I expect my trainees to develop and maintain (routinely review and update) both short and long term research goals as well as set a timeframe for reaching these goals.
- I expect my trainees to submit and publish peer-reviewed first author publications.
- Every graduate student (n=13) and postdoc (n=13) who has trained in my laboratory has left with at least one first author publication. On average, my trainees have more than one first-author paper and several co-authored or collaborative papers. Although I work diligently with trainees to ensure a first author publication is submitted prior to leaving the lab, I am not always able to guarantee that this will occur for manuscripts that are not completed and submitted prior to leaving the lab. Author contribution and order are discussed at the onset of the publication process and updated as needed (i.e. authorship subject to change and is ranked according to research and theoretical contribution).
- I expect my trainees to keep up with the current literature. Generally, trainees should set aside a block of reserved time for reading the primary literature every day (if not weekly).
- I will read and respond to all work submitted to me in a timely manner, within the constraints of my other responsibilities. All work requiring my review should be sent a minimum of 5-7 days before feedback is needed. I will strive to return all materials at least within a week of submission to me (reminders are welcome). I generally prioritize the needs of my trainees over internal or external service activities when possible.
- I expect my trainees to present their research findings at meetings at least once a year. I will help facilitate the presentation of their research at meetings, both internal and external. I will cover all reasonable expenses related to in person or virtual meetings. As long as new data have been generated, trainees are encouraged to apply for travel awards that enable them to attend more than one meeting/year.

Graduate Stipend and Funding

- I have the primary responsibility to provide for adequate funding of both the research needs and stipend for my PhD trainees.
- I expect my trainees to participate in the writing of grant proposals, including writing their own fellowship proposals. While successfully obtaining funding is not a requirement, writing fellowships is viewed as an important training exercise.

- I typically do not cover personal computer-related expenses for hardware or software. These are often included in fellowship (career development) funding. In the case of financial hardship, I am open to sharing a portion of these training-related expenses (please discuss this option with me).

Meetings

- I prefer to meet regularly with my trainees (once a week) at a mutually agreed upon time.
- I expect my trainees to participate in all laboratory group meetings, as well as the seminars and programs related specifically to my trainee's research focus and graduate program. I expect my trainees to participate in these activities (i.e. by asking questions and remaining fully engaged).
- I expect my trainees to meet with their thesis committees at least annually, or as often as required by the chosen graduate program, and to participate in annual progress meetings as required.
- Additional informal meetings may be requested at any time (I have an open door policy).

Writing and Presentations

- I expect trainees to write first drafts of abstracts and manuscripts and I will work closely with them to develop their writing skills on subsequent drafts. My edits to drafts should be accepted (unless they are factually incorrect) but are open to discussion.
- Any written documents (abstracts, applications, etc.) that pertain to Lange lab research must be approved by me (and provided to all co-authors) prior to submission. No exceptions.
- I will be available to listen to practice talks and provide input on slide presentation and verbal communication. The lab as a group serves as a productive and supportive talk "rehearsal" venue.

Professionalism

- I expect my trainees to be good laboratory citizens: help train new students, help maintain equipment, and ensure supplies that are jointly used are maintained.
- I expect my trainees to maintain an accurate and detailed laboratory notebook. This is the legal record of research, and belongs to the laboratory and university, not to the trainee or me. It is critical it be accurate and sufficiently detailed to allow for experiment replication by others.
- I expect all data to be available to me and other collaborating lab members in both writing (in hard copy in the lab notebook) and electronically (and in a shared folder). I expect computer-based (stored) data and images to be backed up to UMN-supported secure data storage (automated daily).
- I expect my trainees to meet laboratory as well as program-related deadlines.
- I will set specific guidelines on work hours, sick leave, and vacation time, and these should be discussed and approved by me. I will help trainees recognize that the amount of time put into research will be directly reflected in the overall time to completion of the PhD.
- I expect my trainees to behave professionally and treat all others with respect. Anything else will not be tolerated.
- I will endeavor to treat everyone in my lab equally and fairly (i.e. I do not believe in hierarchy).
- Honesty is the best policy; dishonesty will not be tolerated and is grounds for immediate dismissal from my laboratory.
- Trainees should speak to me if there are concerns about interactions with other lab members. If there are concerns about interactions with me, please reach out to the graduate program DGS or other program leaders. The [Student Conflict Resolution Center](#) is a helpful resource.

Ethical Behavior

- I will maintain ethical standards in my research and scholarly work, including compliance with institutional and federal regulations for research, as well as issues of copyright.
- I expect my trainees to complete all required training and maintain ethical standards for their research and scholarly work.

Independence

- I will work with my trainees to help them become increasingly independent and increasingly responsible as they progress in their thesis research.
- I will be supportive, equitable, accessible, encouraging, and respectful. I expect my trainees to recognize that constructive criticism and feedback is intended to improve their work.
- I will be an advocate for my trainees during their tenure in my laboratory but also as they continue their specific career pathway.

Professional and Career Development

- I will support the professional development goals of my trainees, and work with them to help define what those will be and how to best achieve them.
- I recognize that we all need mentoring teams. I will help my trainees identify and seek out external resources that will help them reach those goals if they are not part of the laboratory expertise or that of graduate program training.
- I expect my trainees to complete an annual IDP Progress Report and use this as a tool to guide their professional development.

Personal Life and Wellness:

- It is important to find one's own lifestyle balance and seek enjoyment and satisfaction in both one's work/professional life and home/private life and socially with family and friends. I expect my trainees to take time for themselves, in order to ensure optimal physical, psychological, and social well-being.
- Graduate school is a journey with ups and downs. Professional and personal accomplishments should be celebrated. Most trainees also experience hardships. Conversations with me are always confidential (unless I feel you or others are in danger).
- Trainees should be aware of the [mental health and wellness resources](#) at UMN.
- The Lange lab is a team. Please be sensitive to your own health and wellness and to that of other lab members or classmates around you and help refer them to appropriate UMN resources (above).

Timeline

- I expect PhD trainees to schedule, prepare for, and complete their qualifying exams according to their graduate program requirements (typically this occurs during Spring and/or Summer of year 2).
- I expect PhD trainees to complete their PhD in approximately 5 years and MD/PhD trainees to complete their PhD training in 4 years (more or less, as a stated guideline of the MSTP Program).
- I expect my trainees to have at least one first-authored, peer-reviewed research publication prior to completion of the PhD degree.

Postdoctoral Trainees

- I follow the recommended NIH pay scale for postdoctoral fellows (subject to merit for senior >4 years).
- Postdoctoral trainees develop their own projects with guidance from me after interactive discussions.
- I expect my postdoctoral trainees to set up and meet with mentoring committees at least annually, and encourage use of best practices tools for career development and goal setting (i.e. such as the IDP).
- Postdocs are expected to develop (with my guidance), write, and submit local and national individual research fellowship applications (this is not a requirement to enter the lab, but is expected once a body of original data has been generated).
- Postdocs who enter independent academic careers are encouraged to take their research projects with them into future faculty positions.
- Postdocs who enter independent academic careers are welcome to take reasonable portions of any renewable reagents upon leaving my lab (provided these are for personal and non-commercial use).