

Research Training Cheat Sheet

(Questions every research trainee should ask)

Mentoring

- How often would your mentor prefer to meet one on one?
- How often would your mentor like to receive data/results updates?
- What is the best way to informally communicate with my mentor (email, texting, slack, quick conversations, etc.)?
- What is my advisor's mentoring style? How can I meld that style with my own? How can I manage up or meet them halfway?
- Who else is in my mentoring network?: In addition to my faculty mentor, do I know who else can I go to for advice on...?:
 - research methodology and techniques
 - troubleshooting experiments
 - academic progress
 - interdisciplinary questions
 - communication skills
 - professional development
 - potential career path exploration
 - interpersonal issues
 - managing graduate career and life balance

Research Collaborations and Authorship

- What are your mentor's policies on deciding authorship?
- Under what circumstances would your mentor decide to alter agreed-upon authorship order?
- In my research group, what role do grad students take in drafting manuscripts as a first (or later) author?
- In a collaboration with another group, what types of communication would be managed faculty to faculty and what would be managed between grad students, postdocs and staff?
- Will my mentor allow me to participate in invited reviews or other non-research papers?

Plagiarism, Publication and Peer Review

- How does my mentor determine to which journal to submit a manuscript?
- Does my mentor ask grad students/postdocs to participate in peer reviews? If so, how do they acknowledge our contributions to editors?
- Does my research group ever use a plagiarism checker before submitting a co-authored manuscript or grant proposal (like iThenticate, the plagiarism detector used by journals)?
- Who in my research group is a good model for drafting and/or reviewing of manuscripts by grad students/postdocs?

Conflicts of Interest

- Does my mentor have any outside projects, consultancies, industry-sponsored research, or startup companies? If so, how do they balance their role as a faculty member, mentoring, and other commitments?

Data Management and Intellectual Property

- When I finish my rotation/graduate training/postdoc, what will happen to my project?
- How will the data be disseminated?
- What authorship role will I have for any unfinished projects?
- What data or results am I allowed to copy to take with me for reference?
- What follow-ups will this group be doing on my project and can I carve out some research space for follow-up projects from my future research group?
- What are the recordkeeping practices my mentor would like me to use? Is there someone in the group who is a good model?
- If my research project is potentially commercializable, can I be named as a co-inventor? What policies does my mentor use for determining co-inventor status?

Animal Welfare

- What are the most common animal welfare, health problems or handling issues that may arise related to our projects?
- Under what circumstances should I first contact my mentor or first contact a DLAM veterinarian with concerns?

Human Subjects

- What are the most common issues or concerns I should watch out for with patients/research participants in projects like mine? How should I follow up on each?

Misconduct

- Which questionable research practices are most prevalent in our field? How can I avoid those in my project?
- Where can I get more advice on appropriate research design and statistical analysis of my studies?
- If I suspect misconduct or negligence in a colleague, who should I talk to?

Lab/Research Safety

- What are the 4-5 most dangerous things in our work area?
- For each material that I handle, do I know: How to safely handle it? What to do in the event I (touch/inhale/ingest/am exposed to it)? What do I do in the event of a spill?
- For each machine that I operate, do I know: What can go wrong? What are the most dangerous components? How to troubleshoot issues?

General Research Questions for Others

- What are the most pressing unanswered questions in our field today?
- What are the studies that sparked your interest in this research question?
- What are other approaches to this research question?
- What new technologies are poised to revolutionize our field?
- Does this work have potential to be commercialized or moved into public knowledge and use?

Lynn Talton, PhD, 2022

Director, Bioscience Postdoctoral Affairs, David Geffen School of Medicine at UCLA

If you have any suggestions for additional questions to add, let me know!