

The ABCs in choosing a good lab

Choosing the correct lab for your studies is a challenging task for many students. Below find some basic guidelines that may help you choose your lab and Advisor/Supervisor.

A) Start by scanning for labs that match your scientific curiosity

This can be based on your interest in disease, research theme, field and/or technique(s) (e.g. neurodegenerative diseases, proteostasis, cell biology/biochemistry, high-resolution microscopy). There are also many instances (like with me when I was a student) where students discover their passion for a topic/field after attending a seminar talk or a lecture that inspire them. Advice: Go to talks and take the initiative meet research faculty – You might find that many of us (faculty) are very approachable and love to engage in scientific discussions with young talented minds!

Find out the following:

- What are the ongoing projects in the lab?
- What opportunities are available to students?
- What is the mindset of the Group Leader/Advisor? For example, how often does the Advisor meet with his/her students (weekly, monthly, yearly)? Will the Advisor or a postdoc in the lab supervise you?
- Is there an open-door policy? What is the Advisor's experience in mentoring PhD or MBBS/ MD/ PhD students and where are they now?
- What are the expectations for your work?

Don't be afraid to ask questions and engage other lab members. Find out what the lab is really like and how helpful the Group Leader/advisor is (most lab members will be honest)

B) Once you enroll try to understand how the lab functions

- Figure out the “nuts and bolts” of the topic you are working on and comprehend the question(s) you are trying to answer.
- Read the required literature to become more familiar with the topic/field.
- Engage other lab members in discussions and find out what they are doing.
- Monitor the dynamics of the lab members and how they interact with each other and the Lab Head.
- Demonstrate to your Advisor that you can think critically about your research and discuss ideas.
- Try to meet with the Advisor on a regular basis and discuss not only experiments, but also your experience in the lab (be honest).
- Ask for feedback on your performance (its much better to find out how you are doing early than late so that you have the opportunity to improve!).
- Organize your work, perform experiments carefully and maintain an up-to-date, detailed and clearly written lab notebook.
- Take every opportunity to present your work in group or 1-on-1 meetings. This task has a lot of weight so take it very seriously. It will help you think about future experiments and will provide an opportunity reflect on what you have been doing in the lab.

C) Beyond the internship

- If you are interested in pursuing the same lab for your PhD thesis work, have a broader discussion about the expectations, your concerns and available projects that may generate high impact work (this is very important especially if you are thinking of a career in academia)
- **Choose the best lab for your PhD. Remember that you have the choice!** At the end of your internship, talk to other groups within and outside your institute. You are by no means “married” to the lab you did your Honours or MSc. Key elements of making the final decision may include the following aspects:

- **The Advisor/Supervisor:** Has the Advisor the knowledge and expertise to help you succeed in your graduate studies? Does the Advisor able to spare sufficient time to teach, guide and mentor you? Will you be given the opportunity to develop independence as you progress through the studentship?
- **The work environment:** Are the lab members helpful and willing to teach? Are they excited about what they are doing?
- **The resources:** Is the lab running out of gas i.e. is it well funded? Do you have access to infrastructure, equipment and intellectual resources (e.g. expertise, collaborations) to perform your research efficiently and succeed?
- **The project:** Does the topic excites and motivates you? Will you be working on high impact research? Will the experience and the outcome open doors for your future scientific endeavors?

In general, a young student may not be able to fully assess some of these aspects. However, by carefully looking at the scientific direction of the lab and the track record of the Advisor (remember, quality matters more than quantity!), a student may get a decent overview of the kind of work performed in the lab. The project should be exciting to both the student and the Advisor and developed jointly.

Being a researcher is more than a job - it is a journey of discovery

Not everyone gets to brag about discovering new exciting things that will bring change to humanity! The carrier path of a Researcher is built on working passionately and dedicatedly in order to solve nature's puzzles and provide solutions to humanity's biggest problems. Research comes with highs and many many lows. We may hit walls even with the most carefully designed experiments. It is very important to have a positive attitude and keep working hard to find alternative solutions when faced with setbacks.

Making breakthroughs is a lot of fun and extremely rewarding. Remember, what we uncover now perhaps may translate into discoveries that will develop novel therapies for neurodegenerative diseases in the future!

Focus, have fun & do good work!

We are a young lab engaged in exciting research at the forefront of proteostasis and cell repair that has direct impact on human health and disease. You will see me frequently engaged in designing new experiments and working at the bench, which will give you ample opportunities to interact with me on a daily basis. I enjoy getting a tea (sadly no more coffee for me), sitting down and brainstorming new ideas and working together with students. We work hard, but also enjoy life away from the lab - Often I bring food and drinks and go out to celebrate little breakthroughs at the bench. Research can lead to new directions and people come and go, the only constant, however, is your Lab Head who will be your mentor not only during your graduate studies, but also beyond! So make sure you develop a good relationship with him/her.