Choosing a Research Lab

When deciding on a research lab, it is important to find a PI and a lab environment that are a good fit for you. The following are some factors to consider when choosing a research laboratory.

Choosing the right project

• Are you interested in the research of the lab?
• How available are the mentors? Would you be the only one working on this type of project or using this technique, or are others in the lab familiar with it?
• Are there multiple facets to your project that you could work on, in case one component doesn’t work out?

Publishing results

• What is the track record of the lab? Where do they publish? Does this fit with your goals?
• How is authorship determined? Are current members in the lab happy with this process? Do you have a chance at first authorship?

Funding of the lab

• Will you have the funding needed to carry out your project?
• Will you be able to attend conferences?
• Is there an expectation that current funding will continue? Is there a history of loss of funding in the lab? If so, how are student stipends supported?

Mentoring

• Is the PI approachable?
• Current students, postdocs, and scientists are often the mentors that graduate students spend the most time with. They will likely be good resources for you—if they are available and willing!
• It is optimal to have student/postdoc mentors who are familiar with your future project area.
• Ask current lab members: Does the PI talk with students about his/her career goals?
• Does the PI introduce students to other scientists or role models in the PI’s field?
• Does the PI help students network in fields or sectors outside the lab’s specialty?
• Does the PI have a reputation of writing strong letters of recommendation that are effective in helping students/postdocs get a job?
• Where did former students and post-docs get jobs?
• Remember that you can find other mentors to help you explore career options. But you will likely be happiest if your PI is supportive of your career interests.
Choosing a junior vs. senior PI

Junior PI’s (pre-tenure)...

- Are under pressure to produce results to secure a reputation, funding, and tenure. They may be at the bench alongside you, and may have higher expectations for long hours and productivity.
- Have less experience managing and mentoring.
- Likely won’t have a famous name, but keep in mind that you could be there if and when they do make that big breakthrough.
- May not be a “big name” on future letters of recommendation, but may have more time to spend working with you, and therefore could write a more specific letter of recommendation.

Senior PI’s...

- Have years (decades) of experience in research and mentoring.
- May have broad and strong networks, which will be helpful when finding a job or postdoc.
- Might be famous... But was it for something they discovered long ago? Are there new avenues in the lab that are just as exciting and fresh?
- May have many other responsibilities at the university and beyond, so may not be available as frequently.
- Probably haven’t been at the bench in years, so are not familiar with the nuts and bolts of newer techniques.
- Is the PI close to retirement? If so, explicitly ask when they anticipate retiring, and how this will impact your graduate career. Possibilities include needing to take your project to another lab to finish it; potential difficulty in obtaining letters of recommendation in the future (the graduate advisor often serves as a reference after postdoctorate training).

Lab personality

- Is the lab very social—do they spend a lot of time together outside of lab? (This is not for everyone!)
- Is the lab quiet? Or boisterous?
- Is the lab cooperative? Competitive?
- Is it a working environment that will feel comfortable for you and help you be productive?

Expectations for graduation

- What is the standard number of papers a student graduates with and where are those papers published?
- How many years does it typically take for students to graduate, and why?
- Is the transition out of the lab typically smooth or difficult?

REMEMBER: What works for one person might not work for you.

AND... no one PI or lab is perfect! But gathering information will help you decide on which factors are most important for your own success and happiness.

The questions above were used with permission from UCSF Office of Career and Professional Development.

Additional resources

http://career.ucsf.edu/lifesci/samples/choosingthesislab.pdf


http://sciencecareers.sciencemag.org/career_magazine/previous_issues/articles/2003_10_10/noDOI.15079603269040872245