



NORTHWESTERN
UNIVERSITY

The Makings of a Successful Lab Rotation

Including making a good impression
as you join the community of
scientists....

Dynamics of lab rotations

- A combination of evaluation/keeping distance and recruitment/impressing
- Purposely designed to give both parties time to evaluate “fit”
- PI is forming an impression as are others in the lab – likely will compare notes and weight of each variable
- Informal impressions as important as formal ones such as when leading lab meeting
- Everybody trying to decide if/when to commit

Think of each lab as a community...

- Communities have purposes and social orders
- Huge variations between communities
- Some PIs lead and create the communities, others may avoid them, and all points between
- A community has tacit knowledge and practices which may be hard to figure out
 - they tend to resist change
 - especially early, your goal is to move from outside to insider, avoid becoming 'marginalized'
 - The more 'different' you are from others the more it may take to move inside

What are you trying to determine?

- Do you enjoy the scientific topic
- Do you like doing the mechanics of the research
- Does the style of the PI work for you
- Can you work well with the other people in the lab – can you get what you need
- Where would your PhD research start
- Is the level of competition vs. collaboration in the lab and the field a good fit
- What else?

What is the PI trying to determine – predicting the future by the present?

- How does your brain work
- How do your hands work
- Do you get excited by the topic
- Will you be both coachable and independent
- Will you work well with others in the lab
- Is the amount and intensity of time you are willing to put in enough
- What else?

What else are you trying to achieve?

- Skills
 - Lab methods
 - Designing experiments
 - Analyzing data
 - Keeping track of data
 - Reading literature
 - Asking good questions, first for interpretation and later new research questions
- Knowledge in the field
- Maybe research results – highly variable however
- A good impression - even if you decide early you won't stay in the lab!!!

You, PI and others MUST agree on expectations early

- Be direct in establishing parameters
- If PI is not familiar with course demands, start there – don't be afraid to indicate if something is going to be very new!
- If you have other personal or family needs, include those in the conversation with how you manage them
- If demands are very high you will have to negotiate the best you can but you won't change views very often
- All equally or more important with PhD mentor

You are always creating an impression...early ones important

- Don't get paranoid, but others are always 'watching' and forming an impression – normal part of life
- Most often we compare others to ourselves – we usually view how we work as 'normal' or necessary
 - Variation in how much PIs ascribe to this but it is the starting frame of reference
- Competitive vs. collaborative approach to science and life is important frame of reference

Getting started

- Ask for an explanation of the big picture of the work
- Ask for a summary of how they have gotten to where they are now
- What are the important points of disagreement or unknowns in the field?
- Try to get these verbally before you start reading – taking a few notes while listening
- Ask for clarification if you don't understand but expect going back over the same questions more than once – especially after you read

Read, read, read

- Ask for key papers of the PI and the field but don't go too far too fast unless it is easy for you
- Expect to read papers several times getting more and different things each time
- Ask early grad students for what they found most helpful to read at the start

Listen, watch and learn constantly

- Immerse yourself in the lab and watch to understand lab dynamics
- Try to watch and learn about what everyone is doing – in this way you also will learn how people interact and work together or not
- Find out early which people are most helpful
- Find out who are the ‘keepers’ of lab knowledge and how they like to give it out

Creating an impression

- Be present – most PIs and people in the lab assume there is direct correlation between the amount of time in the lab and the level of interest
- As soon as you can, start asking questions and contributing in lab meetings or dialogue
- Asking clarifying questions is good too, shows you are thinking and want to learn more
- ALWAYS prepare carefully for any time you are presenting!!!
 - Find colleagues to practice with – CLIMB great for this

What do you do if/when...

- You start to think this could be the lab for you and your PhD research
- You come to the conclusion this is NOT the lab for you
- You come to the end of the rotation and are not sure if this is the lab for you

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