A Primer for New PhD Students in RSL  
*A brief guide for what to do now that you are here!*

**The Essential PhD Deliverable: Become an Independent Researcher**
To make this a reality you will need to learn to read primary literature, identify interesting questions in your field, create and execute a plan to answer those questions, and publish your results. Your advisor can help you in that process but you alone must be responsible for driving the process or you won’t become truly independent.

Different advisors have different ways of helping you along the way and it is important that you get on the same page. The attached document with student/advisor expectation scales can be a resource to help you have that discussion. Here are some general principles that will help you have success.

1. **Set aside time to read primary literature.** If you don’t set aside time for it, you won’t do it.
2. **Publish three papers.** Papers are how you contribute to the general body of scientific knowledge; they are also how your advisor gets grants (and then pays you). The standard expectation is three first author papers in order to graduate. Communicate with your advisor to ensure your time is spent working toward publishing.
3. **Meet weekly with your advisor and come prepared.** Remember, you are responsible for driving your own research. One on one meetings are a chance for you to get help and feedback from your advisor, not a chance to get marching orders. Come with results or questions, and a plan for what to do next. Results don’t always have to come from your own research – you could bring a paper you have questions about.
4. **Have regular “big picture” meetings with your advisor.** Tell them your target graduation date, your plans for getting there, and how you plan to move closer this week, this month, and this quarter. Come with questions. “Is that timeline too ambitious?” “Do you have a strong opinion about which problem I tackle first?” “I think this is ready to publish, what do you think?” Departments often provide resources to help you with meetings like this. Ex: [https://biosciences.stanford.edu/current/idp/](https://biosciences.stanford.edu/current/idp/)
5. **Put yourself out there.** It gives you a chance to test your ideas; meet collaborators, mentors, and friends; and get exposed to new ideas.
   a. Speak at an RSL meeting at least once a year: [http://rl.stanford.edu/meetings/](http://rl.stanford.edu/meetings/)
      i. Research doesn’t need to be complete to present – these meetings are a chance to get feedback from the experts. We know it can be intimidating but all the faculty in RSL want to see you succeed and they view RSL meetings as a chance to help you practice, not to judge your output.
   b. Meet with members of your dissertation committee.
   c. RSL retreat Committee
   e. Present your work at Stanford symposia
      i. Department orientations
      ii. BioX: [https://biox.stanford.edu/events](https://biox.stanford.edu/events)
      iv. Radiology retreat
   f. Come to Happy Hour
   g. Join our LinkedIn group: [https://www.linkedin.com/groups/7002750](https://www.linkedin.com/groups/7002750)
6. **Be patient.** Becoming an independent researcher is hard and it will tax you. Most students struggle to know if they are making satisfactory progress. Don’t be afraid to talk to your advisor about it! When that weekly meeting comes up and you don’t have results don’t panic! Share with your advisor what you have tried and where you are stuck. Your advisor has been there.
7. **Talk to other trainees.** They have been there and they often have great advice. There is no need to go it alone.
The Essential PhD Corollary: Prove that You Are an Independent Researcher

We hope you do research for the sake of improving society and for the thrill of seeking truth, but when you leave you need to be able to show potential employers that you really did become a scientist. Here are a few things to keep in mind so that you will be ready when that time comes.

1. **Publish!**
2. **Leverage your full committee.** Get to know other members of your committee. Ask for their input. Not only will they have good advice for you, it's a chance for them to get to know you so they have something to say when you ask for that letter of recommendation.
3. **Write your own letter of recommendation.** Decide what you want your letter to say and live up to that praise. Do you want your letter to say you contributed to the scientific community? Join an RSL committee and present at RSL meetings.
4. **Be on the lookout for funding opportunities.** Nothing says, “I can get funding” like getting funding! Here are a few opportunities to keep in mind:
   b. NSF Fellowship: [https://www.nsfgrfp.org/](https://www.nsfgrfp.org/)
   c. BioX Foundation (several funding opportunities): [https://biox.stanford.edu/](https://biox.stanford.edu/)
   d. NDSEG Fellowship: [https://ndseg.asee.org/](https://ndseg.asee.org/)