

Expectations of Undergraduate Researchers

Welcome to the DOSI Lab. There are a few things you should consider before you consider signing your life away ... I mean becoming a member of the lab.

Hard work and perseverance are most important.

Research is not easy, and more often leads to frustration than to happiness. But when things work in the lab there are few experiences that can compare to it! Students must realize that they have to spend at least 8-10 hours a week in order to be effective. That takes considerable commitment and discipline. Students that demonstrate a strong will and a “don’t give up attitude” have the best chance of success and the best research experiences that will likely shape them for the rest of their lives.

Learning and excitement should be in abundance.

Nobody is expecting you to win a Nobel Prize. Your research experience is, first and foremost, a learning experience. Even if you do not do research for a career, the insights you learn into critical thinking and the discipline you will gain will be invaluable for any career. This is not a “class” in the traditional sense, but I expect that you will learn a great deal. It is more important for you to learn than to “get results.” But realize that by getting results, either positively or negatively, you will learn a tremendous amount. It is also my hope that you will experience the pure excitement of trying to figure out how the body works, and someday provide solutions that will help people.

Academic Integrity: don’t mess with it.

Integrity in everything you do should be of paramount importance. Mistakes happen to even the best scientists, but if you are careful you will eventually catch mistakes. Faking data, sabotaging experiments, “cherry-picking” data, or plagiarizing are inexcusable offenses in science. A scientist must be honest and objective or the whole process of sciences comes to a halt. Don’t turn to the dark side for temporary gratification!

Respect for others is important.

You must treat your lab mates, and all people at the Beckman Laser Institute, with respect. This includes lab technicians, administration staff and so on. You must treat everyone the way you want to be treated. No insulting or gossiping will be tolerated. Jokes (in good taste please) are welcome, but any intentionally hurtful remarks are unacceptable behavior.

Working in a team is part of the research experience.

Research often progresses best in a team atmosphere. Because we work in an interdisciplinary environment, no one person has all the knowledge necessary to succeed. Insights also come from many different places and perspectives. You will have to demonstrate that you can work well with others. Most likely you will be paired with other students, and I expect you to help each other to achieve success. Most likely as an undergraduate researcher, you will be taking directions from other researchers, such as from graduate students. However, undergraduates may also be expected to mentor other undergraduates as they progress in knowledge and experience.

Calling in the cavalry when you are stuck is not a crime.

Don’t be afraid to ask for help; this is why we have a diverse group of people in the lab. Nobody will criticize you for asking for help. To be sure you will have to learn to work out things for yourself, but

all of us need help sometimes. Ask even the simple questions ... chances are if you aren't sure, your fellow undergraduates aren't sure either. Remember, it is better to look ignorant than to be ignorant ...

Research Meetings are necessary.

All students are expected to attend at least one research meeting per week. In general, that meeting should be the Undergraduate Research Meeting. This meeting is designed to keep you informed, engaged, as well as accountable. Class schedules may prevent your attendance; in these cases you can attend another DOSI research meeting or make arrangements with me. I am open to meeting with students; don't be afraid to ask to see me.

Careful use of lab equipment.

Please respect the equipment in the lab. Everything you see was purchased with grant money that comes mostly from taxpayer dollars, and was built with considerable effort. Please treat lab equipment carefully, and learn how to use all devices you need in the lab. Computers are not there for downloading movies, music, etc. This also includes any of the shared resources that exist in the BLI: Biochemistry Lab, Histology/Microscopy Lab, Advanced Technology Suite (i.e., the clinic), and the Animal Operating Suite.

Safety at all times.

Please pay attention to all safety and hazard issues, as you learned in the safety training. Use common sense. If you are not sure how to work something, don't hesitate to ask. Nobody will insult you for being safe. If you are required to use any of the shared resources (See #7), then you should meet with the director of that resource to learn their safety and operation rules (see me about this).

Publications can be your goal.

Students can and are encouraged to be authors on conference posters/papers and peer-review papers. It will take considerable effort to become a published author; it is not guaranteed, but with hard work it can be done. The PI will have final say on who the authors will be, but in general two criteria will be taken into account: (a) intellectual effort, and (b) amount and quality of work. Note that students can be first authors, which generally means that you are responsible for the majority of the work. Students are also strongly encouraged to participate in undergraduate research conferences, such as the Excellence in Research Program at UCI. Students should also give strong consideration to completing senior theses.

Don't be afraid to offend me.

Academia is all about a search for truth, and let me be the first to tell you that faculty researchers do not always have the answers. Don't think that if you disagree with me that it is a bad thing; in fact I encourage it. I would not be doing my job if you did not start the process of becoming independently-minded researchers. Feel free to ask questions and investigate things. Be curious. Push boundaries of knowledge. Don't ever let someone's credentials or positions threaten you to accept inadequate answers. Be respectful, but also be prepared to back up your positions. If you have problems, come see me; I don't bite.