

Finding a Research Laboratory - UTSA Undergraduates

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Do you want to work in a research laboratory but don't know how to go about it? This article is designed to help you out. There are a number of things that you need to be thinking about.

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The Right Research Mentor or PI. The right research mentor can greatly enhance your education and further your excitement and preparation for a research career. The wrong one could give you second thoughts about a career that you might have otherwise enjoyed. Below, we provide information on how to choose a compatible mentor for your research.

You will select your mentor from a pre-screened group of tenure-track faculty who should:

- Assist you in developing a reasonably sized research project
- Help you get started with your project and assure that you make progress
- Coordinate training of research techniques that you need to learn
- Provide supplies and laboratory space
- Help you troubleshoot research problems
- Give you encouragement and feedback about your progress
- Show you what life as an academic scientist is really like
- Help you to progress towards your degree and gain skills for beyond
- Help you to develop critical thinking and a scientific mindset
- Help you in researching a good graduate school or post-doctoral position
- Provide advice about avenues that you might follow in a research career
- Assist you in building a professional network of contacts

On the MBRS-RISE (<http://www.utsa.edu/mbrs/>) and MARC-U*STAR (www.utsa.edu/marc/) web pages, you will lists of participating faculty members and a brief description of their research interests. Their description will be linked to a more extensive description of their research interests and a description of projects currently being explored in their laboratories. Choose several program faculty who are performing research that interests you. Provide a list of people whom you find interesting to Dr. Taylor or Dr. Martinez; they make recommendations, and may also suggest additional faculty members with whoml you may be compatible.

You may wish to further explore the activities of the researchers in these laboratories, by looking up their recent journal articles on Medline or Pubmed (<http://www.pubmed.org>; ask Dr. Taylor if you don't know how) prior to



visiting these mentors. This will generally result in them looking favorably on you; you will be indicating a high level of motivation. Although you will likely find their publications difficult to understand at this point, you should at least be able to get a basic idea of the research that they do. Looking up their publications has the added benefit of letting you know if the person's laboratory is actively publishing, which increases your chance of being an author on a paper, which is very desirable for doctoral program admittance.

As many of the faculty members are locked behind security doors in the Bioscience Building, we recommend that your first contact come via telephone or email. If the potential mentor does not immediately respond, they may be buried in work; contact them again after a week or so. When you reach the potential mentor, identify the program that you've been admitted to and either set up an appointment to speak to them face to face, or continue to interact with them via email/phone if they wish.



Establishing a successful working relationship with your mentor requires openness and honesty. The faculty member will have questions for you to judge your level of motivation and enthusiasm and to determine your interests in their research field. They will ask you about your academic background and grades, prior research experiences, research interests, time availability, and future goals. Be prepared to explain what you hope to get out of a research experience, why you are interested in this mentor's research and what general type of project you are interested in. It is advised that you bring a one-page "Bio" or CV, containing your contact information and summarizing any research experience that you may already have. A template for a CV is located at <http://www.utsa.edu/mbrs/pages/resources/cvtemplt.doc>.

In turn, ask the mentor to describe the research projects going on in his/her labs and which projects you might be able to get involved in. You should also inquire about what techniques you would be learning, who would be your primary trainer, and with whom would you be working. Will you be primarily supervised and mentored by others in the lab, or this mentor? What type of time commitment do they expect? Assess for yourself if the mentor's communication style is compatible with yours. Is he/she high or low stress? Does the mentor seem interested in you as a person and make time for you?

You should also tour the lab and speak with other laboratory members. Delicately find out about the working conditions in the laboratory. Find out if undergraduate students are being included as authors on scientific publications. How many hours do students generally work (this varies greatly between laboratories and you may not look good if you work significantly fewer)? Is it a quiet, serious laboratory, or loud and noisy? Is it a messy lab or extremely organized? Do the students like each other or "hang out" with one another after hours? Do you "click" with your mentor, potential teacher, or with your "surrogate" mentor, if your mentor frequently travels? All of these things should be taken into consideration when assessing your compatibility with a lab. Masters students should additionally find out whether people who begin thesis masters in this lab generally finish them...and how long it takes them to do so. Ph.D. students should be very concerned about how long it has historically taken –most- past students to complete and defend their dissertation.



After your meeting, thank the person for their time and information without making a commitment, complete the rest of your interviews, and get back to them as soon as possible. If you fear that this particular mentor or the laboratory and you are not a good match, pay attention to these feelings and interview additional potential mentors. Before you leave, make sure that the faculty member knows how to get in touch with you! In cases where you know that your research interests don't align, ask this person if he or she knows of a faculty member with whom you may have more compatible interests or who is looking for students like you.

After careful consideration, if you feel that the mentor/research project is right for you, ask whether the researcher will agree to be your mentor and allow you to work on the project you have discussed. Be aware that the mentor, also, may wish to hold off and do some inquiring of his/her own.

If you are turned down for a research project, don't take it personally as there are many reasons why a faculty member may deny your request: the current research projects may be different than the projects listed, he/she may be insanely busy or already have the maximum number of students that can successfully be mentored, etc.



Continue to meet with faculty members (doctoral students have the luxury to perform rotations through several laboratories, to find a project and mentor that please them), until you have found a mentor with whom you have a good rapport, who will give you a research project that interests you. Tell this person that you'd like to work in his/her laboratory and have them write an email (gail.taylor@utsa.edu) to the RISE and MARC office to that effect.

If you are having trouble finding a laboratory, do not hesitate to talk to Dr. Taylor or Martinez- they will help you out! 🐭