

How to: Get into Undergraduate Research | Student Doctor Network

<http://www.studentdoctor.net/2011/04/how-to-get-into-research/>

July 20, 2011

Posted on 17 April 2011.

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Regardless of the health profession you are hoping to enter, you'll find that grades alone are not enough to assure admission. Depending on your desired program and the schools you apply to, you may be expected to show experience in diverse areas such as community service, clinical experience, and leadership.

An additional area sometimes overlooked by students is conducting lab research during undergraduate studies. Several counselors we talked to mentioned that a good number of students still apply to health professions schools with little to no research experience, although this is quickly changing.

Undergraduate level research may not be the first thing that pops into your mind if you are not planning to pursue a PhD or work as a professional researcher. Alex, a pre-medical student at California State University at Long Beach, said that research was the last thing on his mind as an option for extra-curricular work. "I've never thought about it since I want to work only as a clinician. I thought clinical experience might be more useful than working in a lab." While the majority of professional school admissions committees that responded to our inquiry did indicate that they found clinical experience to be more important, undergraduate research is gaining ground in terms of being a critical factor for admission.

SUNY Upstate Medical University in New York told us that it has started to consider undergraduate research as part of its screening process, something that it did not do in the past. Several different schools from across different health fields have indicated that they are also following suit. An admissions director from one of the medical schools we contacted informed us that their policy changes are in response to the increased number of qualified applicants and their need for more selection factors.

Other colleges that responded to our inquiry informed us that they only consider research in an applicant's secondary application or during the interview instead of using it as a screening factor. However, most schools did mention that they do take pleasant notice if an applicant has performed research in some formal capacity. So, while the increase in importance of research does vary among the different health profession programs, having any amount of research under your belt should be beneficial and can only add value to your application.

Now that we have an idea of how some professional schools weigh research on your application, what are some other things you should consider about undergraduate research? We considered our own experiences in these matters and talked to some undergraduates from different pre-health fields and the following issues came up:

Lab Availability and Professor Expectations

If you are attending a large university with a large number of pre-health science majors, finding an available position may be an issue. Christine, a pre-dental student from the University of California at Los Angeles, stated that she wasn't able to find a lab for the first year and a half as an undergraduate student. "I wanted to get into a lab early, but most labs were full. I had to wait until some of the upper division undergraduates and graduate students left."

There is no single way to get into a lab as an undergraduate since upper division undergraduates and graduate students are often given seniority by many professors. Keep in mind that professors decide for themselves what their selection criteria and procedures will be. Many require that students perform well in courses that they teach, whereas others may be more flexible. For example, a faculty member from a university in Canada indicated that he would not accept students who have not maintained a GPA of 3.8 or above, a very stringent requirement. However, despite this example, grades are not always the main screening factor. Many faculty members realize that people are different and that grades don't tell the whole story. However, you should consider a 3.0 to be the minimum GPA in order to be taken seriously.

Another major factor that is often underestimated by students is how far along in college to begin applying for a lab; students should actually try to get into a lab with at least two years remaining in their studies. Having two years allows you the chance to learn the techniques in the lab and really contribute to the lab enough to warrant your own project (and maybe a research poster at a conference or a paper in a journal). Also, from the perspective of the faculty member, the fact that the student will be around for a while makes them more attractive (i.e., likely to be accepted into the lab) since they won't graduate and leave right when they get trained and are more productive.

The nature of the research may also present challenges for you when trying to find a lab. In general, the more expensive the research is (i.e., chemicals, fancy equipment), the more experience the professor may require in coursework before allowing students into their lab. Smaller labs are also likely, for obvious reasons, to be more selective than larger ones. In general, labs that perform fieldwork are likely to take more students than those that conduct sensitive experiments dealing with molecular research.

Because they are still growing their research groups, newer faculty members may be more interested in taking undergraduate students and may also be more flexible about their selection criteria.

You should consider how all these factors can affect your candidacy for a lab and how soon you can join a research team.

Research for Non-Science Majors

What to do if you are not a science major? Our first piece of advice is: don't fret! We encountered this issue while talking to Theresa, who is a pre-med majoring in Sociology, at the University of California at Irvine. Although many professors we spoke with agreed that their priority lies with the science students, most said they would welcome non-science majors into their lab. However, non-science majors must often bear the burden of proof that they are academically suited to help conduct scientific research, whereas for science majors, this can be indicated easily by their transcript. There is one point we should make though: non-science students may not receive the same level of involvement in projects that demand higher levels of laboratory equipment usage. So, if you are a non-science pre-health student, you should consider finding a faculty member that will allow you to be really involved in the research instead of just as a low level assistant.

Research for Junior/Community College Students

If your junior or community college campus does not have research opportunities, your first resource should be your local universities. Many universities have outreach programs where you can work for one of their professors for the summer or for some other pre-determined length of time.

Furthermore, even if these formal programs are not available, some professors may take you on as a volunteer if you contact them. If all these efforts fail, see our list of "viable alternatives" below.

What are Some Viable Alternatives?

Should all your efforts not get you into a lab, what else can you do? Well, as it turns out, there are

many different ways you can still be involved in some kind of research. If laboratory research is not currently available to you on your campus, clinical research off-campus may give you alternative opportunities. In addition, many of these off-campus opportunities may also compensate you for your involvement, even if for a short time period.

Many pharmaceuticals companies provide opportunities to undergraduate students to temporarily intern with their research teams. Several of these positions are actual paid internships!

If you live near a teaching hospital of some sort, they may also offer research opportunities for undergraduate students. These positions, however, may or may not be paid depending on the program.

There are also national programs like the [National Science Foundation's Research Experience for Undergraduates programs](#). Your undergraduate advisor or mentor is a valuable source of information about similar programs. Additionally, if the researcher you work with has a grant from these or similar organizations, they may be able to pay you themselves.

There are even, perhaps, potential opportunities on your campus that may be considered less conventional for pre-health students. Dr. John Hansen, Associate Dean of Admissions at the University of Rochester School of Medicine and Dentistry, told us that research is defined broadly at URMC. Students who do not have research in the natural sciences may pursue research in many other subjects, from “anthropology to French literature.” The critical issue is that students display a sense of “curiosity, imagination and a love for life-long learning” that the school cherishes. If you choose to conduct research in a non-natural science field, however, we encourage you to contact your intended professional schools to see how they will consider it before you actually start.

We hope the information above is helpful to you and will aid you during your undergraduate years. We'd like to remind you, however, that everyone's circumstances are different and there is considerable variation in the nature of useful programs out there. While we identified a number of commonalities, there are too many subtle differences among all the many professional schools, undergraduate campuses, and personal experiences to cover in one article. As this is the case, we'd like to remind you to seek advising on your campus whenever necessary. Although we hope that this article gives you a sense of direction, only an adviser who has access to your personal information can properly give you in-depth and personalized advice. Furthermore, your campus adviser can keep you up to date on current or future research opportunities.

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Acknowledgements

We would like to thank the following individuals, groups and entities for their contributions to the information presented in this paper.

- Dr. John Hansen, Associate Dean of the University of Rochester School of Medicine and Dentistry
- SUNY Upstate Medical University Student Admissions Office
- David Nguyen
- All students and health professional schools that responded to our inquiry.