



NETWORKING

Networking may sound daunting or superfluous, but its importance is not to be underestimated. In your search for a summer research experience, think about who you know (and often, who *they* know); ask your profs, parents, parents' friends, or friends' parents if they know anyone looking for a dedicated, intelligent undergrad to work in their lab during the summer.

On a smaller scale, many people are willing to let you shadow them for a day, just to find out more about what they do. Even short, unpaid experiences like this might help you make connections with people that could grow into bigger opportunities. The Career Center has files on alums in biology, which is an excellent resource. The Career Center also has handouts on how to connect with alumni and others in a respectful, productive way.

Cultivating contacts and developing a network is equally important once you are in a summer research program. Get to know the graduate students, post-docs, and research technicians in your lab. Find out what path they took to their current positions. Ask what advice they have for you. If you are at a university, get to know the graduate admissions staff. Finally, socialize with other undergraduates in your program—have potlucks, or go to lunch regularly. The relationships you develop now may become important networking contacts in the future.

ADDITIONAL RESOURCES

- The Career Center has a wealth of additional materials that will help you fine tune your search for summer programs and your application materials. For detailed guidance in gathering references, take a look at this file in the Common Drive on all Carleton computers: I: Departments/CARE/Common/Handouts/References Tip Sheet.pub.
- You can also check out the web pages at go.carleton.edu/alumni/directory to identify alumni who are active in biology. These alums may be able to help you find a summer position or give your general advice about a biology career.
- If you have found any resources that have gone unmentioned here, e-mail Sarah Deel in the Biology Department (sdeel@carleton.edu) and let her know about them!



A very short guide to...

SUMMER RESEARCH IN BIOLOGY



INTERESTED IN SUMMER RESEARCH?

NOT SURE WHERE TO START?

This pamphlet is designed to help you find a program, apply, and make the most of your research experience.

*Created as part of Bio 395 at Carleton College,
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Also available online at:
serc.carleton.edu/cismi/researchopp.html

ONLINE RESOURCES

Try these sites to find summer programs:

apps.carleton.edu/curricular/biol/opportunities/

- Biology research opportunities with descriptions, links and contact information
- Programs are unordered; use browser search tool to identify programs of interest.

serc.carleton.edu/cismi/researchopps.html

- Summer research opportunities in all science departments for Carleton students at Carleton College
- Includes links to other summer research programs

www.nsf.gov/crssprgm/reu/reu_search.cfm

- Official National Science Foundation (NSF) listing of Research Experience for Undergraduate (REU) programs, covering all areas of the sciences
- Programs are listed alphabetically; use browser search tool to find a specific geographic location or research subject area.

www.training.nih.gov/student/

- Biomedical internships available through the National Institutes of Health (NIH)
- Good for pre-meds and anyone interested in the biomedical sciences

www.scied.science.doe.gov/scied/erulf/about.html

- US Department of Energy website listing program sites at national labs
- Includes a variety of geographic locations; click “Choosing a lab” to find specific programs.

www.amgenscholars.com/

- Fancy website advertising programs at 10 top research institutions, funded by the biotechnology company Amgen
- Preference given to students who will pursue a PhD or MD-PhD



APPLYING

Before Applying

- Application due dates vary: Start looking for programs over winter break. Keep a table of deadlines and requirements.
- Start writing your personal essay early so you have time for revision. Ask for help from friends, faculty, the Write Place, and the Career Center.
- Be aware of the types of research available in each program; investigate specific faculty. Contact faculty beforehand if the program recommends it.
- Program admission is competitive, so apply to several. However, you will want to tailor your application to each program; budget your time accordingly (4-10 applications is reasonable).
- Get to know potential letter-writing faculty.
- Be mindful of start dates: many overlap with Carleton’s schedule—apply, but be aware you may need to work something out if you’re accepted, and that this may not be possible in all programs.

The Application

- In your essay, refer to specific faculty projects that interest you. Note how their interests match your own long-term plans (but also make clear you have general interest in the institution’s program).
- If the application process includes an interview, practice interviewing at the Career Center. Have some questions ready for the interviewer that show you know about the research that’s going on there.
- Keep in mind as you write your essay that many programs are intended specifically for prospective PhD students.

Faculty Letters of Recommendation

- Ask faculty for letters a month before the first letter is due.
- Provide to faculty: the course you took with them; why you are applying to these programs; your personal essay (when complete); transcript/resume; any forms required by the program; a stamped envelope addressed to each program; a schedule of due dates for all your programs.
- The Career Center’s “Tip Sheet: References” has helpful information on asking faculty for letters.

ON THE JOB

- Ask questions when you have them.
- You will make mistakes; figure out how best to learn from them.
- Have confidence in your skills and abilities. Don’t let grad students push you around.
- Have a sense of humor and some flexibility as you deal with the inevitable roadblocks and setbacks.
- Remember that you represent Carleton; your behavior may influence the acceptance of future Carls into the program.
- Take advantage of all the opportunities that are offered to you, which may include attending department seminars or talks by visiting speakers, participating in journal clubs or reading groups, and presenting your own results to others.



BACK ON CAMPUS

After you return to school in the fall, consider participating in Bio 395 and/or the Sigma Xi All-Science poster session. Bio 395 is designed to help you place your summer research in the context of your Carleton coursework, and includes information about designing effective posters. The poster session is a wonderful way to help you synthesize your research experience, share it with other Carleton students and faculty, and learn from other students’ research experiences.