

Life Sciences Sub-Committee on Undergraduate Research:

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Prepared on behalf of the Life Sciences Undergraduate Planning Curriculum Committee (Faculties of Arts and Science and Medicine):

Division of Anatomy

Department of Biochemistry

Department of Cell and Systems Biology

Department of Chemistry

Department of Ecology and Evolutionary Biology

Human Biology Program

Department of Immunology

Department of Laboratory Medicine and Pathobiology

Department of Mathematics

Department of Molecular Genetics

Department of Nutritional Sciences

Department of Pharmacology and Toxicology

Department Physics

Department of Physiology

Department of Psychology

Faculty of Pharmacy

Department of Teaching Labs



Original Mentored Research



UNIVERSITY OF TORONTO

How to Find an Undergraduate Research Opportunity in Life Sciences

Life Sciences Sub-Committee on Undergraduate Research 2012 -13

Undergraduate Research Opportunities in the Faculties of Arts and Science and Medicine at University of Toronto

Follow these easy steps...

1) Determine Your Interests in Research

- Determine and explore your interests as early as first year by checking out departmental websites, researchers' websites, PubMed links to researchers published papers, and research posters in hallways adjacent to laboratories. Look for volunteer opportunities in labs even if it's not a research student position, or follow up on topics that sparked your interest during a lecture. Interests are likely to change as you progress through your program of study.
- Read general and specialty journals. Reading current review articles is often a good way to obtain an overview of a topic.

2) Who Should You Talk to and Where Should You Look

- Start off by approaching course instructors/professors whose areas of study are of interest to you. Ask for their advice regarding where to look for opportunities.
- Students you meet in class, especially those who have already participated in undergraduate research.
- Upper year students who have gained research experience.
- Professors, Lab Instructors, Teaching Assistants. Set yourself apart from other students by putting yourself out there.
- Departmental staff: Advisors, Administrators, Program Directors etc.
- Undergraduate Student Societies/Course Unions (e.g., they provide information sessions and seminars about research experiences.)
- Review departmental office bulletin boards and websites, usually listed under "undergraduate", "summer programs".
- Search central repositories which list undergraduate research opportunities
- Review the University of Toronto Blue Book at www.library.utoronto.ca/bluebook to locate professors.
- Get familiar with your library by getting to know the librarian, attend workshops.
- Look for opportunities outside your department, college, university.

3) Discover Different Ways to Explore Research

- Meet professors, representatives from hospitals, research institutes, colleges, and funding agencies at annual **undergraduate research information sessions**.
- Explore what other undergraduate students are doing in research and what you could do at **undergraduate poster sessions**.
- Attend departmental and student group invitations for **seminars, meet-and-greet, welcome lunches**.
- Attend **departmental research seminars**.
- Check out your department for more information about their **research oriented courses**.
- Ask your professor or teaching assistant whether you could visit their laboratory and **shadow a scientist** to gain exposure to the research environment.
- Obtain permission from a department and locate a professor who will agree to supervise you in a **supervised research course**.
- Apply for funding opportunities and look for a suitable research laboratory to conduct **independent research study**.
- Apply for **studentships and fellowships** to partake in a research internship under the direction of a supervisor, usually with a stipend.
- **Research Opportunity Program (ROP299Y)** has many research programs for second year undergraduate students.
- Check with your department for information about the **Undergraduate Research Opportunity Program (UROP)**.
- Check out the **Centre for International Experience (CIE)** for research opportunities abroad.
- Check out the **work study** positions on the website of the Career Centre.
- Check out **affiliated hospitals and their research institutes**
- Discover opportunities at **other national/international universities and research institutes**

4) Where Do You Start

- Make your decision, stay committed and start planning 3-9 months prior to start, as it is competitive and there are a limited number of research spots available.
- Keep track of application deadlines. September/October and January/February and late ones in April. Research opportunities for the summer are often posted in the preceding fall term or by February (UROP).
- Carefully review research postings. Look for prerequisites, minimum GPA, time commitments etc.
- Explore and read about those professors' research work that interests you.
- Visit your career centre and talk to a career counselor about career management, how to network, write your cover letter, resume and interview techniques.
- Make sure your cover letter, resume, references, transcript, and application forms are carefully prepared and up to date.
- Contact your references ahead of time to let them know they may be asked for a reference.

- When you contact a specific professor by e-mail include a cover letter, in which you describe your research interests, program and year of study, and career goals. Address the professor by name and show that you have read up on the professor's field of research (don't send mass e-mails). In addition to the cover letter, include a copy of your resume and transcript.

5) How do You Prepare for the Interview

- Learn about the professor's research work, publications, and website. Be very knowledgeable about the research work done in the lab.
- Review interview information, including, address, and directions on how to get there.

6) The Day of the Interview

- Bring a notepad/pen, a copy of your cover letter, resume, names and contact addresses of potential referees, and if applicable, a portfolio or samples of your work (e.g., old lab notebooks from undergraduate lab courses.)
- Arrive punctually and turn your mobile phone off.
- Listen carefully, speak clearly.
- Be ready to talk about any research you have done.
- Be ready to talk about your interest in science and research.
- Express your enthusiasm about the opportunity to do research.
- Ask questions and take notes.

7) After the Interview

- Follow-up after your interview.
- Some researchers are willing to give you feedback about your interview.
- Reflect and learn for your next interview. You gain experience from each interview.
- Stay in touch.

8) Patience and Perseverance

- Don't get discouraged if you don't get the position; this is competitive, but almost all interested students eventually find a position.
- Don't expect fast responses from professors. Stay optimistic, stay updated, keep applying and don't give up.
- Due to the competitive nature of the process, contact as many professors as possible to increase your chance.
- Perseverance with the application process.

Congratulations and Good Luck!