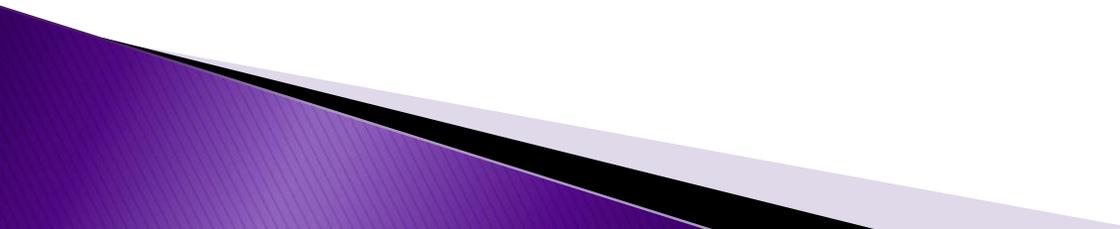


Undergraduate Summer Research Workshop

Western Undergraduate Research Journal:
Health and Natural Sciences
<http://ir.lib.uwo.ca/wurjhns/>

Outline

- ▶ Introduction – WURJHNS Team
 - ▶ Why do research?
 - ▶ What are the typical duties of an undergraduate research assistant?
 - ▶ An appropriate timeline for applications
 - ▶ Where to start looking for research positions
- 

Outline

- ▶ Contacting potential supervisors
- ▶ Transcripts
- ▶ Resumes / Cover Letters
- ▶ What if you don't get the research position

“Luck is when preparation meets opportunity” □

Lucius Annaeus Seneca

Why do Research?

- ▶ You can potentially earn \$4500 or more during one summer of work
- ▶ It provides great experiences within an academic setting
 - At times you can gain experience working with patients
 - Good preparation for thesis projects in future
 - Relevance to coursework
- ▶ Networking
 - Reference letters for professional/graduate school
 - Connecting with people of similar interests

What are the Typical Responsibilities?

- ▶ Clinical Research Student
 - Pulling research articles
 - Learning → via reading many papers
 - Data collection, entry and analysis
 - Completing odd lab jobs
 - Performing physiological manoeuvres → sometimes
 - Working in the clinic → can perform simple tasks such as taking vitals
 - Attending rounds with your supervisor and residents
 - Completing a small personal project
 - Writing small sections of a manuscript
 - Completing ethics proposals

What are the Typical Responsibilities?

- ▶ Basic Sciences research student
 - Optimizing and performing lab techniques (histological stains, immunostains)
 - Obtaining ideas for methodology from literature
 - Completing odd lab jobs
 - Literature search
 - Performing experiments and interpreting data for various assigned projects
 - Attending lab meetings
 - Collaborating with technicians in your lab or experts from other labs
 - Contributing to manuscripts

Research Student Expectations

- ▶ Work independently
 - Keep yourself busy (not told what to do)
 - ▶ Team environment
 - Get along with staff and be respectful
 - ▶ Lots of information to take in
 - Publications, terminology, lab techniques
 - ▶ Manage time effectively
 - Deadlines, multi-tasking
 - ▶ Seminars, posters, presentations
- 

An Appropriate Timeline

- ▶ There are two ways to apply to research positions
 - Through a central board that processes applications
 - Directly to the supervisor
- ▶ When applying to a central board, the timeline and due dates have already been set
- ▶ However, when applying to the supervisor directly, a due date is not provided. In this case, an appropriate timeline is necessary.

An Appropriate Timeline

- ▶ An appropriate timeline → if you must apply directly to the supervisor
 - The key point here is that you are not the only student applying
 - Typically, supervisors have selected the students they want to interview by mid – late January
 - Once this selection is complete, other emails are generally not considered
 - Responses are not always immediate!

Where to Find Research Positions

- ▶ Good places to start looking for research positions:
 - Go to your respective faculties
 - Contact your health practitioner
 - If you are looking for positions outside of the university (i.e. in London hospitals, or in other cities) the internet is the best place to start
 - If this is your first time looking for research positions some keywords to search in Google are:
 - Summer Student Program + (insert city name)
 - Undergraduate Summer Research + (insert city name)

NSERC Grant

- ▶ Offered by the Canadian Government for undergraduate students doing research
- ▶ Duration of 16 weeks
- ▶ Minimum of \$5625.00 (at UWO)
- ▶ Heavily based on Academic standing (marks)
- ▶ http://www.nserc-crsng.gc.ca/Students-Etudiants/UG-PC/USRA-BRPC_eng.asp

NSERC at UWO

- ▶ Deadline for Schulich School of Medicine and Dentistry: TBA
 - Check out the Schulich Research Office Website
 - <http://www.schulich.uwo.ca/research/residentsstudentspdfs/schulich-nserc-usra-competition/>
- ▶ Health Sciences Deadline: TBA
- ▶ For more information, please visit your academic counselor

Work Study at UWO

- ▶ Funding available to students who demonstrate financial need
- ▶ Rate of pay: \$10.25/hour
- ▶ Number of hours:
 - For school year: 200 hours for 8 months
 - For summer months: 100/200/300 for 4 months
- ▶ Apply via Student Services – Financial Aid Profile

Contacting Potential Supervisors

- ▶ If you are applying to a central board, there are generally instructions explaining the various requirements
 - ▶ However, if you must contact a supervisor directly (by email is the best way), what do you say?
 - ▶ There are three key things to keep in mind
 - Understand the supervisor's research description
 - Be humble
 - Avoid generic emails
- 

Contacting Potential Supervisors

- ▶ Understanding the supervisor's research focus
 - Look for what type of research they do (basic science, clinical and others)
 - Have a good understanding of their research focus
 - This will allow you to understand what they may be looking for in a student
 - You can then tailor your email according to how you can potentially fulfill that need

Sunnybrook Hospital Scientist Profile

- ▶ Appointments and Affiliations:
 - Senior scientist, physical sciences – Odette Cancer Research Program, Sunnybrook Research Institute
 - Associate professor, medical biophysics, University of Toronto
- ▶ Research Foci:
 - Medical imaging analysis
- ▶ Research Summary:
 - Dr. M's group focuses on developing novel medical image analysis techniques with a focus on:
 - Tools to provide diagnostic support to physicians and radiologists: in particular, Dr. M's group is developing a computer-aided detection and diagnosis (CAD) system for breast MRI, which will allow them to detect cancer earlier and with greater specificity
- ▶ Selected Publications: see current publications list at PubMed

Sunnybrook Hospital Scientist Profile

- ▶ Appointments and Affiliations:
 - Senior scientist, physical sciences – Odette Cancer Research Program, Sunnybrook Research Institute
 - Associate professor, medical biophysics, University of Toronto
- ▶ Research Foci:
 - Medical imaging analysis
- ▶ Research Summary:
 - Dr. M's group focuses on developing novel medical image analysis techniques with a focus on:
 - Tools to provide diagnostic support to physicians and radiologists: in particular, Dr. M's group is developing a computer-aided detection and diagnosis (CAD) system for breast MRI, which will allow them to detect cancer earlier and with greater specificity
- ▶ Selected Publications: see current publications list at PubMed

Contacting Potential Supervisors

▶ Be humble

- The major issue → students have misconceptions about undergraduate research
 - For instance, people send emails about the tasks they wish to achieve in the summer (without necessarily considering what their potential supervisor may need)
 - Also, people send emails about their goals without realizing the amount of time required to complete a study or the limitations of their knowledge

Contacting Potential Supervisors

- ▶ Avoid generic emails
 - Avoiding generic emails can be accomplished by including information such as what you hope to get out of the research position

Contacting Potential Supervisors

Good day Dr. (include name),

My name is (include name) and I am an undergraduate student at the University of Western Ontario. I found your research description on the SHSC website to be very intriguing. I also took the time to (include anything extra that you have done).

I would greatly appreciate the opportunity to work as your summer student and contribute to any aspect of your research.

(Include how you can potentially fulfill a need in their lab); (Include what you would like to get out of the research position)

Attached are my cover letter, resume, and transcript. Thank you for your consideration and I hope to hear from you soon.

Sincerely,
(include name)

Contacting Potential Supervisors

- ▶ Apart from the short message in your email, you should attach your:
 - Unofficial transcript
 - Cover letter (if you are able to make one)
 - Resume
 - Concise and relevant

Transcripts

- ▶ Are my grades high enough?
 - It depends on the research position you are applying for:
 - If you are applying for a university based NSERC research position, marks are important
 - If you are applying to a supervisor in a hospital, however, grades are not the only factor
- ▶ When applying, attach a copy of your unofficial transcript (from student center)

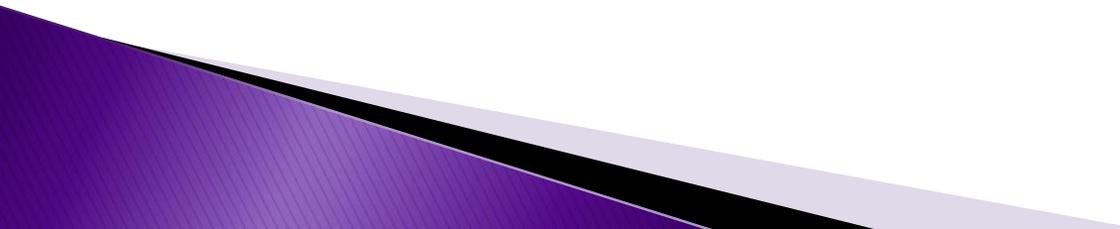
Cover Letter and Resume

- ▶ Some key points to consider
 - Avoid abbreviations
 - Include your computer skills
 - Include relevant course work or skills obtained
 - Everything in your resume does not have to pertain directly to research but be concise
- ▶ There are online resources available
 - http://success.uwo.ca/careers/resumes_cvs_letters/index.html
 - Go to <https://careercentral.uwo.ca> to find workshops

After you have applied

- ▶ Will I get a reply right away?
 - If you have applied early enough, you will likely get replies
 - However, not always the case
- ▶ If you are offered an interview:
 - Great! We would love to hear about it. At the end of the presentation, we will provide some contact information.

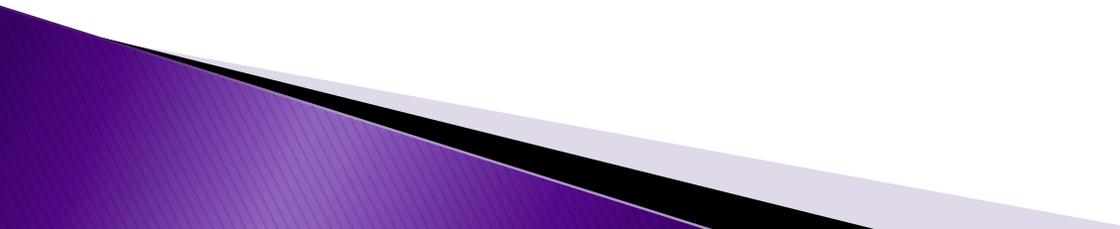
After you have applied

- ▶ If you do not receive an interview, there are many other options
 - Part time research positions may be available
 - Volunteer positions in a lab can be obtained
 - Taking courses and participating in activities that can increase your qualifications for a research position
- 

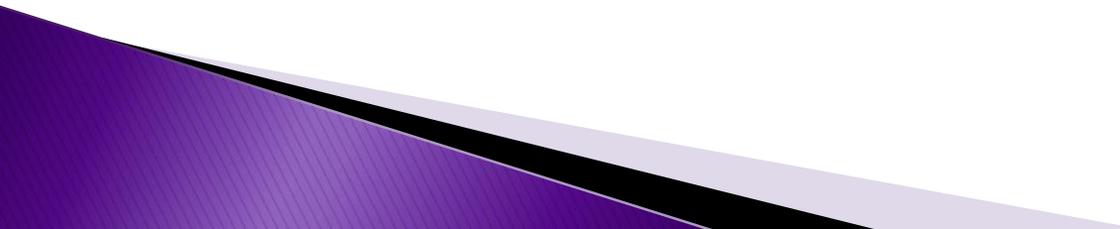
WURJ: Health and Natural Sciences

- ▶ Joining the WURJHNS is:
 - A great way to gain experience:
 - Reviewing articles
 - Presenting at workshops
 - Serving as the editor of a peer-reviewed journal
- ▶ An excellent addition to applications for summer research positions, professional school and graduate school
- ▶ For more information, visit:
<http://ir.lib.uwo.ca/wurjhns/>

WURJ: List of Grants

- ▶ List of possible grants/research opportunities that you can apply for
 - Most are summer positions available to undergraduate students
 - ▶ Has been put together by the members of our Academic Affairs Committee
 - ▶ Can be found on our website
- 

Summary

- ▶ Research offers very valuable experience
 - ▶ Look at things from the perspective of the researcher, be humble, realistic, avoid generic emails
 - ▶ Apply early!
 - ▶ Be yourself at the interview
 - ▶ There are many options if you do not receive a job
- 

Contact Information

WURJHNS – wurjhns@uwo.ca

Please email if you have received a job offer, interview or if you have any more comments regarding today's presentation.