



Western Undergraduate  
Research Journal  
Health and Natural Sciences  
prepare. grow. achieve.

# Undergraduate Summer Research Workshop

**Western Undergraduate Research Journal:**

**Health and Natural Sciences**

[ir.lib.uwo.ca/wurjhns](http://ir.lib.uwo.ca/wurjhns)



# Why do Summer Research?

- ✓ Gain practical real-world experience
- ✓ Pursue your interests
- ✓ Expand your knowledge
- ✓ Make an impact in the scientific community
- ✓ Meet amazing people
- ✓ Get money
- ✓ Great for your resume



# Typical Responsibilities

## Basic Science Research Student

- Survey literature
- Optimize/perform lab techniques (staining tissues, running gels)
- Perform experiments and interpret data
- Completing menial but **very important** jobs
  - Cleaning dishes, making solutions
  - Exposed to mechanisms of research



# Typical Responsibilities

## Clinical/Dry Lab Research Student

- Interviewing patients
- Conducting chart reviews
- Validating data
- Performing literature reviews
- Writing code to analyze data
- Conduct statistical analyses
- Completing ethics proposals



# Finding Research Positions

- Contact professors directly
- Look in your faculty
  - Don't be afraid to venture into other faculties
- Apply through scholarship and award programs
  - Work Study
  - NSERC–USRA (Undergraduate Student Research Award)
  - BUSRP (Biochemistry Undergraduate Summer Research Program)
  - DUROP (Dean's Undergraduate Research Opportunities Program)
  - Many more...



Secret Unlocked

**RESEARCHERS ARE NOT  
LIMITED TO THE PROFESSORS  
THAT GIVE YOUR LECTURES!**

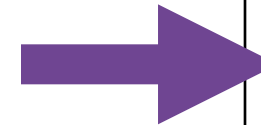


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# Where to Find Research Opportunities

- List of research opportunities can be found on our website

**[ir.lib.uwo.ca/wurjhns](http://ir.lib.uwo.ca/wurjhns)**



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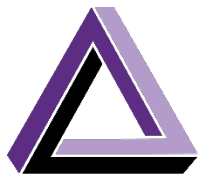


## DUROP

### Dean's Undergraduate Research Opportunities Program

- \$6000 over four months (\$3000 Schulich + \$3000 Supervisor)
- Who can apply:
  - Undergraduate science students
- How to apply:
  - CV + Transcript (unofficial)
  - 300 Word Statement – Why do you wish to pursue this opportunity?
  - 2 reference letters
  - 3 most interested projects/supervisors
- Applications due mid February





# BUSRP

## Biochemistry Undergraduate Summer Research Program

- \$6000 over 16 week work term (May – August)
- Who can apply:
  - 2nd Years - 85% or above in Biochemistry 2280A
  - 3rd Years - 75% or above in Biochemistry 3381A
- How to apply:
  - Join the OWL BUSRP site (will be available during winter)
  - Fill application form
  - Resume, transcript (unofficial) and a reference letter
- Applications due in early March



# SURF

## Microbiology and Immunology Summer Undergraduate Research Fellowship

- \$6000 over of 16 week work term (May – August)
- Who can apply:
  - 2nd Years or 3rd Years who have taken Microimm 2500A/B
- How to apply:
  - Fill the application form available on the program website
  - Resume, transcript (unofficial), personal statement, a letter of reference
- Applications due in late February



# NSERC Grant

- \$4,500 for a full 16-week period (+ min. 25% from supervisor)
- Who can apply:
  - Schulich School of Medicine and Dentistry and Department of Biology
  - Supervisors who currently hold an NSERC grant
  - Heavily based on marks
- How to apply:
  - Complete and submit your application using NSERC's online system
- Each university sets its own deadlines



# Work Study at UWO

- If eligible for Work Study – Research positions available
- Funding for students who demonstrate financial need
- Rate of pay: \$11.25/hour
- Number of hours:
  - School year: 200 hours for 8 months
  - Summer: 100/200/300 for 4 months
- Apply via Student Services – Financial Aid Profile



# Volunteering?

- Great way to get started with research if you are not eligible for work study
- Much easier to apply for paid opportunities in the following year
- Volunteer EARLY!



# GTA Opportunities

- SickKids Summer Research Program
- D+H Summer Student Research Program at Sunnybrook Research Institute
- LMP Summer Undergraduate Research Program at the University of Toronto
- Keenan Research Summer Student Program
- Summer Student Program at Women's College Research Institute
- Ward Summer Student Program at Bloorview Research Institute



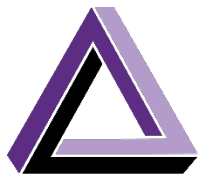
**APPLY EARLY**



Secret Unlocked

**Ask your Professor to Apply to  
a Scholarship Program for You**





# Contacting Potential Supervisors

- Scholarship and grant programs have application instructions
- Best way to contact professors is by email
- **Attach your transcript and CV/resume**
- When sending emails, keep in mind:
  1. Be Humble and Polite (Don't spam them)
  2. Show Interest the Supervisor's Research
  3. Try to Stand Out



# Transcripts and CVs

- When contacting a professor for the first time, attach your transcript and CV
- Unofficial transcript from student center is OK
- CV should include any relevant or irrelevant experiences
  - Did you gain something valuable from the experience?
- How important are my marks and experiences?
  - Depends on what you're applying for
  - NSERC – marks are very important
  - Research at a hospital – experience is important too (volunteer)



# Be Humble and Polite

- This is your first impression, **make it count**
- Well-written and formal email
- Try to avoid
  - Talking about getting paid or funding opportunities
  - Being too ambitious with your goals
  - Assuming what you'll be doing in the lab
  - Typing the professor's name wrong
  - Writing too much – too much information is a turn-off!



# Show Interest in the Research

- Understand the supervisor's research focus
- What they are currently studying
- Drop a line or two about **why** you are interested in their research



# Check Out Our Faculty Profiles



## Western Faculty Profile: Dr. John McCormick

*Alex Zhou<sup>1</sup>*

<sup>1</sup>Faculty of Science, Western University

No conflicts of interest declared.

"As someone who really loves science, if you actually get into the lab and work on something for multiple years, to actually figure things out and how they work ... I find that really satisfying ... to figure out these really complex questions."

While completing his undergraduate degree at Queen's University in the Life Sciences program, Dr. McCormick's journey into microbiology began after his third year as an undergraduate gaining a job with Health Canada in the Bureau of Microbial Hazards in Ottawa. Having sparked his interest in microbiology and bacteriology in particular, he proceeded to do a fourth year Honours thesis project at Queen's in an immunology lab where he worked on natural killer T-cells. Later, he moved to the University of Alberta to do graduate work involving food microbiology, an experience he considered very application driven. However, while there, Dr. McCormick also developed skills mainly pertaining to molecular biology.

After completing his PhD, Dr. McCormick soon moved to North Carolina State University to

complete a post-doctoral research fellowship. Despite having a good scientific environment, the techniques he was using were very similar to what he had already learned in his PhD studies. He later accepted a second post-doctoral fellowship at the University of Minnesota. Here, he developed an aptitude for infectious disease models, an area of research much closer to medical microbiology. This experience expanded his knowledge in immunology and biochemistry. After remaining in this position for three years, Dr. McCormick made the decision to return to Canada. Moving back to London, Ontario in 2001, he was initially recruited by the Lawson Research Health Institute and moved his laboratory to the University of Western Ontario campus in 2006. When asked how he likes London, he casually replies: "We like the city, good school, strong department, all the resource resources you need are here ... haha, and students are good."

Dr. McCormick's laboratory currently investigates the pathogenesis of bacteria that cause very severe disease, as well as their natural life cycle. Detailing further this research focus, he explains:



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**Try To Stand Out**



Secret Unlocked

**When Contacting Professors, Ask to  
Meet and Discuss Opportunities**



# Shadow A Researcher Day

- 2<sup>nd</sup> Semester
- Students shadow a researcher or their graduate students for a day
- Open to all undergraduates
- Application required
- Great networking and learning opportunity





# After You Have Applied

- Will I get a reply right away?
  - Unfortunately... No...
- Continue to communicate with potential supervisors
- What happens if you don't get a research position?
  - Ask if there are volunteer positions available!
- If you are offered an interview:
  - Interview styles
  - Understand your supervisor's research
  - Be honest
  - Prepare interesting questions
  - **BE CONFIDENT** 😊



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# Got the Position, Now What?





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**GET PUBLISHED**



# What is WURJHNS?

## STUDENT RUN

- A journal created and run by Western students for Western undergraduate students and their research

## PEER REVIEWED

- Articles are reviewed by trained students and **FACULTY** members to ensure scientific integrity in all publications

## OPEN ACCESS

- The WURJHNS is available online and open to anyone and can be found at <http://ir.lib.uwo.ca/wurjhns/>



# Types of Submissions

Research Article

Short Communication

Mini-Review Article

Students in the Field Report

Briefing Notes

Perspective Article

Letters to the Editor & Letter in Reply

Original Course Work

Evolutionary GEMs approved by Prof Gray

## We Accept:

The FIRST author must be a Western undergraduate student

Articles from Health Sciences and Natural Sciences are accepted



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**Send Us Love**

**wurjhns@uwo.ca**



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