

# Arvin Zaker

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## EDUCATION

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### University of Ottawa

*Honours Bachelor of Science (H.BSc) in Translational and Molecular Medicine (CGPA: 9.96/10)*

Sep 2019 - Apr 2023 (Expected)

Ottawa, ON

### Cardiff Sixth Form College

*General Certificate of Education Advanced Subsidiary Level (Avg: 100%)*

Sep 2018 - Jun 2019

Cardiff, UK

## SKILLS

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- **Programming languages:** R, Python, Bash
- **Software:** ImageJ, Imiris, Microsoft Office Suite
- **Bioinformatic skills:** Transcriptomic and genomic analysis, bioinformatic pipeline development
- **Lab techniques:** Cell-based assays, phage extraction and amplification, fluorescent staining and imaging, electrophysiological recordings, PCR, western blot
- **Operating systems:** Linux, Windows

## RESEARCH EXPERIENCE

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### Bioinformatics Researcher - Honours

*University of Ottawa*

Sep 2021 - Present

Ottawa, ON

- Supervisor: Dr. Arvind Mer
- Creating computation tools for analyzing cancer drug response
- Developing novel *in vivo* drug response quantification metrics
- Correlational study between cancer gene biomarkers and drug response
- Open source package development and developing analysis pipelines

### Undergraduate Trainee - Laboratory rotations & TST program

*University of Ottawa*

Jan 2021 - Sep 2021

Ottawa, ON

- Supervisor: Dr. Arvind Mer
- Utilized the R programming language in genomic and transcriptomic data analysis
- Cancer phenotype and survival analysis of novel DNA repair complexes
- Data extraction and processing from Pan-cancer databases

### Undergraduate Trainee - SEA-PHAGES program

*University of Ottawa*

Sep 2021 - Dec 2021

Ottawa, ON

- Supervisor: Dr. Adam Rudner
- Performed environmental sampling and phage extraction techniques
- Utilized cell-based assays for characterization of the phage
- Performed DNA extraction and genomic analysis via gel electrophoresis
- Used Python and ImageJ to analyze the restriction digest pattern of phages

### Research Assistant - UROP program

*University of Ottawa*

Nov 2020 - Jul 2022

Ottawa, ON

- Supervisor: Dr. Jean-Marc Renaud
- Designing experiments and setting up research equipment for data collection
- Performing experiments on mouse muscles using electrophysiological equipment
- Performing antibody staining, fluorescent imaging, and analysis of muscle tissue in the Imiris program

## WORK EXPERIENCE

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### Family Visitor and Program Assistant (Volunteer)

*Garry J Armstrong Long Term Care Centre*

Feb 2020 - May 2020

*Ottawa, ON*

- Communicated effectively with residents
- Aided residents to perform group activities
- Channeled residents' questions to the nursing staff

### Stock Manager and Coordinator (Volunteer)

*Scope Charity Shop*

Sep 2018 - Jun 2019

*Cardiff, UK*

- Communicated with a team of volunteers and employees
- Created accounting records to manage incoming donations
- Priced items during sales events
- Rearranged store merchandise to ensure customer satisfaction

### Sales Associate (Volunteer)

*Tenovus Cancer Care Charity Shop*

Sep 2018 - Jun 2019

*Cardiff, UK*

- Coordinated with a team of volunteers
- Managed sales and provided excellent customer service
- Aided in designing marketing campaigns to promote the store's merchandise
- Tracked customer donations and returns

## VOLUNTEER EXPERIENCE

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### Lets Talk Science Presenter

*University of Ottawa*

Jan 2021 - Present

*Ottawa, ON*

### Founder of the University of Ottawa Canadians Sharing Locally and Globally

*University of Ottawa Canadians Sharing Locally and Globally*

Dec 2020 - Present

*Ottawa, ON*

### Volunteer Coordinator at Best Buddies club

*Best Buddies club*

Sep 2020 - Present

*Ottawa, ON*

### Founder and Coordinator of Hands on Health Magazine

*Interprofessional Health Association (IPHA) club*

Jun 2020 - Present

*Ottawa, ON*

### Childcare work experience

*Cylch Meithrin Trelai Child Care Center*

Apr 2019

*Cardiff, UK*

## AWARDS & ACHIEVEMENTS

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**TMM Summer Training (TST) program**, University of Ottawa (\$8200)

May 2022 - Aug 2022

**Work in Biomedical Research (WiBR) Scholarship**, University of Ottawa (\$3500)

May 2022 - Aug 2022

**UROP Scholarship**, University of Ottawa (\$1000)

Dec 2020 - Apr 2021

**Dean's Honour List & Merit Scholarship**, University of Ottawa (\$1000 per term)

Sep 2019 - Present

**Admission Scholarship**, University of Ottawa (\$3000)

Sep 2019 - Apr 2020

**Academic Excellence Scholarship**, Cardiff Sixth Form College (\$14000)

Sep 2018 - Jun 2019

## POSTERS & PRESENTATIONS

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**Poster and Seminar Presentation "Analysis of Drug Response in Patient-Derived Xenograph"** Feb & Sep 2022

*Faculty of Medicine, University of Ottawa*

*Ottawa, ON*

**Poster and Presentation "Discovery and Characterization of Bacteriophage Arzan"**

*Faculty of Medicine, University of Ottawa*

Dec 2021

*Ottawa, ON*

**Poster "Role of Adenosine Receptors on mice skeletal muscle fatigue kinetics"**

*Faculty of Medicine, University of Ottawa*

Apr 2021

*Ottawa, ON*