

Arvin Zaker

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EDUCATION

University of Ottawa

Honours Bachelor of Science (H.BSc) in Translational and Molecular Medicine (CGPA: 9.97/10)

Sep 2019 - Apr 2023

Ottawa, ON

Cardiff Sixth Form College

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

Sep 2018 - Jun 2019

Cardiff, UK

SKILLS

- **Programming languages:** R, Python, Bash
- **Software:** ImageJ, Imiris, Microsoft Office Suite
- **Bioinformatic skills:** Transcriptomic and genomic analysis, bioinformatic pipeline development
- **Lab techniques:** phage extraction and amplification, fluorescent imaging, electrophysiological recordings

RESEARCH EXPERIENCE

Bioinformatics Researcher

University of Ottawa

Sep 2022 - 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 2022 - Aug 2022

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
- Utilizing text mining algorithms for biomarker discovery

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
- Performed DNA extraction and genomic analysis via gel electrophoresis
- Used Python and ImageJ to analyze the restriction digest pattern of phages
- Phage discovery and characterization (Arzan and Khorshid)

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

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)

Sep 2018 - Jun 2019

*Scope Charity Shop**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)

Sep 2018 - Jun 2019

*Tenovus Cancer Care Charity Shop**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**Lets Talk Science Presenter**

Jan 2021 - Present

*University of Ottawa**Ottawa, ON***Founder of the University of Ottawa Canadians Sharing Locally and Globally**

Dec 2020 - Present

*University of Ottawa Canadians Sharing Locally and Globally**Ottawa, ON***Volunteer Coordinator & Co-Chair at Best Buddies club**

Sep 2020 - Present

*Best Buddies club**Ottawa, ON***Founder and Coordinator of Hands on Health Magazine**

Jun 2020 - Present

*Interprofessional Health Association (IPHA) club**Ottawa, ON***PUBLICATIONS****Large-scale phenogenomic analysis of human cancers uncovers frequent alterations affecting SMC5/6 complex components in breast cancer**

(under revision in NAR Cancer)

*Shamayita Roy, Arvin Zaker, Arvind Mer & Damien D'Amours***Text-Mining Based Feature Selection for Anticancer Drug Response Prediction**

(submitted to Brief. Bioinform.)

*Grace Wu, Arvin Zaker, Shivanshi Tripathi, Arvind Mer***Comprehensive analysis of drug response metrics in patient-derived xenografts**

(in preparation)

*Arvin Zaker, Arvind Mer***AWARDS & ACHIEVEMENTS****NSERC - Undergraduate Student Research Awards (USRA) (\$7500)**

May 2023 - Aug 2023

TMM Summer Training & Work in Biomedical Research Scholarship (\$8200)

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**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"**

Dec 2021

*Faculty of Medicine, University of Ottawa**Ottawa, ON***Poster "Role of Adenosine Receptors on mice skeletal muscle fatigue kinetics"**

Apr 2021

*Faculty of Medicine, University of Ottawa**Ottawa, ON*