

# Arvin Zaker

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## EDUCATION

<b>University of Ottawa</b> <i>Honours Bachelor of Science (H.BSc) in Translational and Molecular Medicine (CGPA: 9.97/10)</i>	Sep 2019 - Apr 2023 Ottawa, ON
<b>Cardiff Sixth Form College</b> <i>General Certificate of Education Advanced Subsidiary Level (Avg: 100%)</i>	Sep 2018 - Jun 2019 Cardiff, UK

## SKILLS

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

## PUBLICATIONS

<b>Large-scale phenogenomic analysis of human cancers uncovers frequent alterations affecting SMC5/6 complex components in breast cancer</b> <i>Shamayita Roy, Arvin Zaker, Arvind Mer &amp; Damien D'Amours</i>	(under revision in NAR Cancer)
<b>Text-Mining Based Feature Selection for Anticancer Drug Response Prediction</b> <i>Grace Wu, Arvin Zaker, Shivanshi Tripathi, Arvind Mer</i>	(submitted to Brief. Bioinform.)
<b>Comprehensive analysis of drug response metrics in patient-derived xenografts</b> <i>Arvin Zaker, Arvind Mer</i>	(in preparation)

## AWARDS & ACHIEVEMENTS

<b>NSERC - Undergraduate Student Research Awards (USRA)</b> (\$7500)	May 2023 - Aug 2023
<b>TMM Summer Training &amp; Work in Biomedical Research Scholarship</b> (\$8200)	May 2022 - Aug 2022
<b>UROP Scholarship, University of Ottawa</b> (\$1000)	Dec 2020 - Apr 2021
<b>Dean's Honour List &amp; Merit Scholarship, University of Ottawa</b> (\$1000 per term)	Sep 2019 - Present
<b>Admission Scholarship, University of Ottawa</b> (\$3000)	Sep 2019 - Apr 2020
<b>Academic Excellence Scholarship, Cardiff Sixth Form College</b> (\$14000)	Sep 2018 - Jun 2019

## POSTERS & PRESENTATIONS

<b>Poster and Seminar Presentation "Analysis of Drug Response in Patient-Derived Xenograph"</b> <i>Faculty of Medicine, University of Ottawa</i>	Feb & Sep 2022 Ottawa, ON
<b>Poster and Presentation "Discovery and Characterization of Bacteriophage Arzan"</b> <i>Faculty of Medicine, University of Ottawa</i>	Dec 2021 Ottawa, ON
<b>Poster "Role of Adenosine Receptors on mice skeletal muscle fatigue kinetics"</b> <i>Faculty of Medicine, University of Ottawa</i>	Apr 2021 Ottawa, ON

## RESEARCH EXPERIENCE

<b>Bioinformatics Researcher</b> <i>University of Ottawa</i>	Sep 2022 - Present Ottawa, ON
<ul style="list-style-type: none"><li>• Supervisor: Dr. Arvind Mer</li><li>• Creating computation tools for analyzing cancer drug response</li><li>• Developing novel <i>in vivo</i> drug response quantification metrics</li><li>• Correlational study between cancer gene biomarkers and drug response</li><li>• Open source package development and developing analysis pipelines</li></ul>	

**Undergraduate Trainee - Laboratory rotations & TST program**

Jan 2022 - Aug 2022

*University of Ottawa**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**

Sep 2021 - Dec 2021

*University of Ottawa**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**

Nov 2020 - Jul 2022

*University of Ottawa**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)**

Feb 2020 - May 2020

*Garry J Armstrong Long Term Care Centre**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**

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**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*