

# Arvin Zaker

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## EDUCATION

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<b>University of Ottawa</b> <i>Honours Bachelor of Science (H.BSc) in Translational and Molecular Medicine (CGPA: 9.98/10)</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

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

## WORK EXPERIENCE

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<b>Bioinformatics Researcher</b> <i>University of Ottawa</i>	Sep 2022 - Present Ottawa, ON
<ul style="list-style-type: none"><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>	
<b>Patient Care Coordinator &amp; Receptionist</b> <i>Chadha Medical Clinic</i>	Sep 2022 - Present Ottawa, ON
<ul style="list-style-type: none"><li>• Assisted with appointment scheduling, referrals, and testing coordination to 30+ patients weekly</li><li>• Collaborated with the medical team and to address patients' unique needs and backgrounds.</li><li>• Ensuring timely follow-ups and patient satisfaction in a fast-paced environment,</li></ul>	
<b>Undergraduate Trainee - Laboratory rotations &amp; TST program</b> <i>University of Ottawa</i>	Jan 2022 - Aug 2022 Ottawa, ON
<ul style="list-style-type: none"><li>• Utilized the R programming language in genomic and transcriptomic data analysis</li><li>• Cancer phenotype and survival analysis of novel DNA repair complexes</li><li>• Data extraction and processing from Pan-cancer databases</li><li>• Utilizing text mining algorithms for biomarker discovery</li></ul>	
<b>Undergraduate Trainee - SEA-PHAGES program</b> <i>University of Ottawa</i>	Sep 2021 - Dec 2021 Ottawa, ON
<ul style="list-style-type: none"><li>• Performed environmental sampling and phage extraction techniques</li><li>• Performed DNA extraction and genomic analysis via gel electrophoresis</li><li>• Used Python and ImageJ to analyze the restriction digest pattern of phages</li><li>• Phage discovery and characterization (Arzan and Khorshid)</li></ul>	
<b>Research Assistant - UROP program</b> <i>University of Ottawa</i>	Nov 2020 - Jul 2022 Ottawa, ON
<ul style="list-style-type: none"><li>• Designing experiments and setting up research equipment for data collection</li><li>• Performing experiments on mouse muscles using electrophysiological equipment</li><li>• Performing antibody staining, fluorescent imaging, and analysis of muscle tissue in the Imiris program</li></ul>	
<b>Family Visitor and Program Assistant (Volunteer)</b> <i>Garry J Armstrong Long Term Care Centre</i>	Feb 2020 - May 2020 Ottawa, ON
<ul style="list-style-type: none"><li>• Communicated effectively with residents</li><li>• Aided residents to perform group activities</li><li>• Channeled residents' questions to the nursing staff</li></ul>	

## Volunteer Sales & Stock Coordinator

Sep 2018 - Jun 2019

*Scope Charity Shop & Tenovus Cancer Care Charity Shop*

*Cardiff, UK*

- Collaborated with volunteer teams across two charity shops
- Managed sales, customer service, and donation tracking
- Created accounting records and priced items for sales events
- Assisted in developing marketing campaigns for store promotion
- Rearranged store merchandise to enhance customer experience

## 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 & Co-Chair 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*

### Fundraising event participant

*Allameh Helli 3 High School*

Jan 2016

*Tehran, IR*

## PUBLICATIONS

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### 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 preperation)

*Arvin Zaker, Arvind Mer*

## AWARDS & ACHIEVEMENTS

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### 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