

# Arvin Zaker

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## OBJECTIVE STATEMENT

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Highly motivated Bioinformatics Researcher seeking to leverage extensive experience in medical research, data analysis, and computational tool development to support adverse drug reaction surveillance in the Pharmacovigilance role at Shoppers Drug Mart. Committed to utilizing my strong analytical abilities, attention to detail, experience in the healthcare sector, and capacity to work collaboratively to enhance health and wellness innovation.

## 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
- **Operating systems:** Linux, Windows
- **Lab techniques:** phage extraction and amplification, fluorescent imaging, electrophysiological recordings

## WORK EXPERIENCE

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### Bioinformatics Researcher

*University of Ottawa*

Sep 2022 - Present

*Ottawa, ON*

- 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

### Patient Care Coordinator & Receptionist

*Chadha Medical Clinic*

Sep 2022 - June 2023

*Ottawa, ON*

- Assisted with appointment scheduling, referrals, and testing coordination to 30+ patients weekly
- Collaborated with the medical team and to address patients' unique needs and backgrounds.
- Ensuring timely follow-ups and patient satisfaction in a fast-paced environment

### Undergraduate Trainee - Laboratory rotations & TST program

*University of Ottawa*

Jan 2022 - Aug 2022

*Ottawa, ON*

- 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*

- 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*

- 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

### 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

## Volunteer Sales & Stock Coordinator

Sep 2018 - Jun 2019  
Cardiff, UK

*Scope Charity Shop & Tenovus Cancer Care Charity Shop*

- 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*

## EDUCATION

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### University of Ottawa

*Honours Bachelor of Science (H.BSc) in Translational and Molecular Medicine (CGPA: 9.98/10)*

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

## 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