

# Arvin Zaker

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## 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 - Apr 2022

*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

*Scope Charity Shop & Tenovus Cancer Care Charity Shop*

Sep 2018 - Jun 2019

*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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<b>Lets Talk Science Presenter</b> <i>University of Ottawa</i>	Jan 2021 - Present Ottawa, ON
<b>Founder of the University of Ottawa Canadians Sharing Locally and Globally</b> <i>University of Ottawa Canadians Sharing Locally and Globally</i>	Dec 2020 - Present Ottawa, ON
<b>Volunteer Coordinator &amp; Co-Chair at Best Buddies club</b> <i>Best Buddies club</i>	Sep 2020 - Present Ottawa, ON
<b>Founder and Coordinator of Hands on Health Magazine</b> <i>Interprofessional Health Association (IPHA) club</i>	Jun 2020 - Present Ottawa, ON
<b>Childcare work experience</b> <i>Cylch Meithrin Trelai Child Care Center</i>	Apr 2019 Cardiff, UK
<b>Fundraising event participant</b> <i>Allameh Helli 3 High School</i>	Jan 2016 Tehran, IR

## PUBLICATIONS

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<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

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

## 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