

# Arvin Zaker

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## EDUCATION

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### 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

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- **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

## 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 2021 - Present  
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

**Stock Manager and Coordinator (Volunteer)**Sep 2018 - Jun 2019  
Cardiff, UK*Scope Charity Shop*

- 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  
Cardiff, UK*Tenovus Cancer Care Charity Shop*

- 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  
Ottawa, ON*University of Ottawa***Founder of the University of Ottawa Canadians Sharing Locally and Globally**Dec 2020 - Present  
Ottawa, ON*University of Ottawa Canadians Sharing Locally and Globally***Volunteer Coordinator & Co-Chair at Best Buddies club**Sep 2020 - Present  
Ottawa, ON*Best Buddies club***Founder and Coordinator of Hands on Health Magazine**Jun 2020 - Present  
Ottawa, ON*Interprofessional Health Association (IPHA) club***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 preparation)*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