

# Arvin Zaker

[arv.zaker@gmail.com](mailto:arv.zaker@gmail.com) | (613) 614-9254 | [GitHub](#) |

## EDUCATION

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### University of Ottawa

*Honours Bachelor of Science (H.BSc) in Translational and Molecular Medicine (CGPA: 9.96/10)*

Sep 2019 - Apr 2023 (Expected)

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
- **Lab techniques:** Cell-based assays, environmental sampling, phage extraction and amplification, fluorescent staining and imaging, electrophysiological recordings, PCR, western blot
- **Languages:** English, Persian
- **Operating systems:** Linux, Windows
- **Other:** Hardware assembly and troubleshooting

## WORK EXPERIENCE

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### Bioinformatics Researcher

*University of Ottawa*

May 2021 - Present

Ottawa, ON

- Supervisor: Dr. Arvind Mer
- Developing computation tools for analyzing cancer drug response
- Survival analysis of novel DNA repair complexes
- Implementing machine learning algorithms to improve response detection
- Open source package development and developing analysis pipelines

### Undergraduate Trainee - Laboratory rotations

*University of Ottawa*

Jan 2021 - Apr 2021

Ottawa, ON

- Supervisor: Dr. Arvind Mer
- Utilized the R programming language in genomic data analysis
- Optimized programs analysis of large datasets
- Data extraction and processing from TCGA, METABIRC, and cBioPortal databases
- Correlational study between cancer gene biomarkers and drug response

### Undergraduate Trainee - SEA-PHAGES program

*University of Ottawa*

Sep 2021 - Dec 2021

Ottawa, ON

- Supervisor: Dr. Adam Rudner
- Performed environmental sampling and phage extraction techniques
- Utilized cell-based assays for characterization of the phage
- Performed DNA extraction and genomic analysis via gel electrophoresis
- Used Python and ImageJ to analyze the restriction digest pattern of phages

### Research Assistant - UROP program

*University of Ottawa*

Nov 2020 - Jul 2022

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

### 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

**Stock Manager and Coordinator (Volunteer)***Scope Charity Shop*

Sep 2018 - Jun 2019

*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)***Tenovus Cancer Care Charity Shop*

Sep 2018 - Jun 2019

*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***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 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***AWARDS & ACHIEVEMENTS**

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**UROP Scholarship**, University of Ottawa (\$1000)

Dec 2020 - Apr 2021

**Merit Scholarship**, University of Ottawa (\$1000 per term)

Sep 2020 - Present

**Admission Scholarship**, University of Ottawa (\$3000)

Sep 2019 - Apr 2020

**Dean's Honour List**, University of Ottawa (awarded each term)

Sep 2019 - Present

**Academic Excellence Scholarship**, Cardiff Sixth Form College (\$14000)

Sep 2018 - Jun 2019

**POSTERS & PRESENTATIONS**

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**Seminar Presentation "Analysis of Drug Response in Patient-Derived Xenograph"***Faculty of Medicine, University of Ottawa*

Apr 2022

*Ottawa, ON***Poster and Presentation "Analysis of Drug Response in Patient-Derived Xenograph"***Faculty of Medicine, University of Ottawa*

Feb 2022

*Ottawa, ON***Poster and Presentation "Discovery and Characterization of Bacteriophage Arzan"***Faculty of Medicine, University of Ottawa*

Dec 2021

*Ottawa, ON***Poster "Role of Adenosine Receptors on mice skeletal muscle fatigue kinetics"***Faculty of Medicine, University of Ottawa*

Apr 2021

*Ottawa, ON***Poster "Insulin Pump Belt Manufacturing"***Allameh Helli 3 Exceptional Talent School*

May 2018

*Tehran, IR***Poster "Jack-knife Construction Crane Optimization"***Allameh Helli 3 Exceptional Talent School*

May 2017

*Tehran, IR*