Rhiannon Cameron

BACHELOR OF SCIENCE MICROBIOLOGY

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Vancouver B.C., V5T 2H5, Canada

EDUCATION

2020-2022   M.Sc. Bioinformatics // UNIVERSITY OF BRITISH COLUMBIA, B.C.
Starting September 2020

2019   B.Sc. Microbiology // UNIVERSITY OF VICTORIA, B.C.

Graduating GPA: 8 (A) UVIC Grade Scale   4.00/4.33

AWARDS

NSERC-CREATE Bioinformatics Scholarship Awardee ($24,300)
JUN 2020 | NSERC CREATE Bioinformatics Graduate Training Program Grant
- Summer 2021 Internship with Dr. Athanasios Zovoilis at the Southern Alberta Genome Sciences Centre RNA Genomics Laboratory.

SKILLS & EXPERTISE

Research Interests // Genomics, Ontologies, Infectious diseases, Human microbiome, De novo assembly, Antimicrobial peptides, Microbial ecology, Signal transduction pathways, Metabolism, UX design.

Computation // Python (Proficient), C++ (Basics), R (Basics), Linux/Windows/MacOS Command line/Terminal, Version control, BASH (RegX), Bioinformatics: BLAST, MSA, Genome Databases/Organizers (VOCS, VGO), Phylogenetics (e.g. MEGA, Dendroscope, Geneious).

Math/Statistics // Calculus, Linear Algebra, Statistics (e.g. Binomial, Poisson, and Normal distribution; ANOVA; Regression and Correlation).

Laboratory* // Fundamental biochemical, microbiological and molecular biological laboratory techniques including but not limited to: SDS-PAGE, Protein Purification, ELISA, Culturing Hybridomas, Gel Electrophoresis, Molecular Cloning, Transposon Mutagenesis, and PCR.

Other // Markdown, LaTeX, Graphic Design, TESL, French (Conversational).

*my ability to perform laboratory bench work is severely impacted by my physical disability.

RESEARCH EXPERIENCE

BC PUBLIC HEALTH BIOINFORMATICS LABORATORY **// RESEARCH ASSISTANT/CURATOR**
FEB 2020 – PRESENT | DR. WILLIAM HSIAO | CENTER FOR DISEASE CONTROL, B.C.

- Collect and curate SARS-CoV-2 and COVID-19 related metadata for the Canadian COVID Genomics Network (CanCOGeN) initiative.
- Beta tester for the CanCOGeN covid19ValidationGrid; test guidelines and functions, meticulously explore possible usage scenarios, and provide ideas for improvement.
- Produce sample data and quality control information for validating CanCOGeN tools.
- Content creator for the CanCOGeN metadata wiki.
- Manual curation and term edits for the FoodOn and GenEpiO ontology databases using Protégé and GitHub.
- Generate curator training materials and perform curator demo webinars.
- Systematic literature review on the accessibility of public health genomics.

VIRAL BIOINFORMATICS RESEARCH CENTRE **// DIRECTED STUDIES STUDENT**
SEP 2017 – APR 2018 | DR. CHRIS UPTON | UNIVERSITY OF VICTORIA, B.C.

- Produced specifications for, and managed implementation of, bioinformatics tools and interfaces developed at Dr. Chris Upton's Viral Bioinformatics Research Centre (VBRC), while performing analyses of laboratory generated data and unprocessed published data (obtained from PubMed).
- Conducted a literature review and bioinformatic analysis of the novel influenza A virus gene NEG8.
- Developed a theoretical phylogenetic Tree GUI for virus selection in Viral Orthologous Clusters (VOCs) database, and proposed solutions for tools that visualized data in a manner inaccessible to colour blind individuals.
- Studied and reviewed bioinformatics tools for the analysis of virus genomes.
- Coached VBRC programmers on the functions of the bioinformatics tools from the perspective of a researcher and regularly made optimization recommendations.
- Presented detailed reports on progress and results, as well as updated VBRC online guides and documentation.

UNIVERSITY OF REGINA **// RESEARCH ASSISTANT**
MAY 2014 – AUG 2014 | DR. ANDREW CAMERON | REGINA, S.K.

- Generated significant and well-controlled scientific research results on Sxy toxicity in *Salmonella enterica typhimurium* in a level 2 bio-safety laboratory supervised by Dr. Andrew Cameron and Dr. Ebtihal Al-shabib. Research results added to a manuscript being prepared for peer-reviewed publication.
- Performed laboratory tasks including but not limited to: aseptic pipette technique, PCR amplification and plasmid modification, cell separation, preparation of LB growth media, poured plates, inoculation of agar plates and broths, growth on selective media, colony

isolation, serial dilution, plate counts, identification and characterizing of colonies, and gel electrophoresis preparation and application.

- Investigated and identified a source of contamination in the laboratory by testing all available laboratory equipment, surfaces, and media, while keeping thorough documentation of the process.
- Took accurate and comprehensive laboratory notes, now used as a positive example for future members of the laboratory, as well as provided regular slideshow presentations on progress and results.

OTHER EXPERIENCE

VANCOUVER BIOINFORMATICS USER GROUP // COMMUNICATIONS VOLUNTEER
JAN 2020 – PRESENT | VANCOUVER, B.C.

- Outreach, social media, and coordinating out-of-town speaker's activities.
- Assist with general event coordination activities.

NEIL SQUIRE SOCIETY // COMPUTER COMFORT VOLUNTEER
JUL 2019 – PRESENT | BURNABY, B.C.

- Help adults with disabilities develop basic computer skills in weekly sessions.
- Recommend and develop resources for client to study and reference.

BIOCHEMISTRY AND MICROBIOLOGY STUDENT SOCIETY // CO-PRESIDENT (Elected Position)
APR 2015 – DEC 2015 | UNIVERSITY OF VICTORIA, B.C.

- Directed and delegated to a group of my peers.
- Demonstrated communication and dispute resolution skills.
- Developed and operated within budgets, managerial accounting.
- Organized and managed BMSS events on and off campus.
- Conducted team building and training activities.
- Managed marketing and social media accounts.

RELEVANT TRAINING & CERTIFICATIONS

2020	**Ladies Learning Code //** Using Data to Solve Problems: An Introduction to Artificial Intelligence and Machine Learning for Beginners <*Workshop*>
2019	**MITx (edX) 6.00.1x //** Introduction to Computer Science and Programming Using Python <*Credential*>
2019	**MITx (edX) 6.00.2x //** Introduction to Computational Thinking and Data Science <*Credential*>
2019	**Ladies Learning Code //** JavaScript for Beginners: An Introduction to the Fundamentals of of Web Programming <*Workshop*>

REFERENCES

Dr. William Hsiao | Principal Investigator & UBC Clinical Assistant Professor
BC Public Health Bioinformatics Laboratory
BC Centre for Disease Control
Vancouver, B.C.
[Contact Information: Omitted]

Dr. Chris Upton | Professor & VBRC Principal Investigator
Department of Biochemistry and Microbiology
& Viral Bioinformatics Research Centre
University of Victoria
Victoria, B.C.
[Contact Information: Omitted]

Dr. Perry Howard | Professor and Department Chair
Department of Biochemistry and Microbiology
University of Victoria
Victoria, B.C.
[Contact Information: Omitted]

Dr. Ebtihal Al-shabib | Assistant Professor
Department of Microbiology
Kuwait University
Kuwait City, Kuwait.
[Contact Information: Omitted]

Dr. Andrew Cameron | Associate Professor & IMSS Co-Principal Investigator
Department of Biology
& Institute for Microbiology Systems and Society
University of Regina,
Regina, S.K.
[Contact Information: Omitted]