Christopher Hughes

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Nationality: Canadian
Google Scholar Citations

2477 Carolina Street, Unit 303
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LinkedIn Profile

Relevant Skills

Research and Leadership Abilities

- Highly skilled with a broad range of molecular biology techniques, including the manipulation and testing of bacteria and yeast using a variety of cloning and PCR techniques.
- Extensive experience using software tools such as Microsoft and Google Office suites, R, Python, and Adobe Illustrator for data logging, analysis, interpretation, reporting, and visalization.
- Experienced in the optimization, operation, and maintenance of a wide variety of highly-technical scientific instruments, such as mass spectrometers, HPLC hardware, PCR thermocyclers, and microplate readers.
- Skilled in the development, management, and execution of small and large scale projects comprising individuals or collaborative teams of individuals working towards completion of set aims.
- I am motivated, a fast learner, excited to learn and contribute to part of a team, and am reliable.

Current Role

2018-present | **Staff Scientist**
British Columbia Cancer Research Centre

In this role with Dr. Poul Sorensen, my responsibilities include:

- Independent conception, development, grant acquisition, execution, and supervision of studies examining the dynamics of protein translation at a sub-cellular level in cancer, with specific substudies focused on elucidating the mechanistic roles of targets using combinations of molecular biology, sequencing, proteomics, metabolomics, microscopy, and bioinformatic techniques.
- Participation in pan-Canada and global research projects involving the Sorensen lab, including experimental conception and design, data acquisition and analysis, grant acquisition, and student supervision.

Recent Publications

2021 Zhang, H., **Hughes, C.S.** *et al*, Proteomic screens for suppressors of anoikis identify IL1RAP as a promising surface target in Ewing sarcoma *Cancer Discovery*. PMID: 34021002

2019 **Hughes, C.S.**, Sorensen, P.H., Morin, G.B. A Standardized and Reproducible Proteomics Protocol for Bottom-up Quantitative Analysis of Protein Samples using SP3 and Mass Spectrometry *Methods in Mol. Biol.*. PMID: 30852816

2019 **Hughes, C.S.**, Moggridge, S., Mueller, T., Sorensen, P.H., Morin, G.B., Krijgsveld, J. Single-pot, Solid-phase-enhanced Sample Preparation for Proteomics Experiments *Nature Protocols*. PMID: 30464214

2019 Kovalchik, K.A., Colborne, S., Spencer, S., Sorensen, P.H., Chen, D.D.Y., Morin, G.B., **Hughes, C.S.**$^{\diamond}$, RawTools: Rapid and Dynamic Interrogration of Orbitrap Data Files for Mass Spectrometer System Management *J. Prot. Res.*. PMID: 30462513

2018 Kovalchik, K.A., Moggridge, S., Chen, D.D.Y., Morin, G.B., **Hughes, C.S.**$^{\diamond}$ Parsing and Quantification of Raw Orbitrap Mass Spectrometer Data using RawQuant *J. Prot. Res.*. PMID: 29682972

2018 Moggridge, S., Sorensen, P.H., Morin, G.B., **Hughes, C.S.**$^{\diamond}$ Extending the Compatibility of the SP3 Paramagnetic Processing Approach for Proteomics *J. Prot. Res.*. PMID: 29565595

2018 **Hughes, C.S.**, Morin, G. Using Public Data for Comparative Proteome Analysis in Precision Medicine Studies *Proteomics*. PMID: 28887829

2017 **Hughes, C.S.**, Spicer, V., Krokhin, O.V., Morin, G.B., Investigating Acquisition Performance on the Orbitrap Fusion When Using Tandem MS/MS/MS Scanning with Isobaric Tags *J. Prot. Res.*. PMID: 28418257

2017 **Hughes, C.S.**, Zhu, C., Spicer, V., Krokhin, O.V., Morin, G. Evaluating the Characteristics of Reporter Ion Signal Acquired in the Orbitrap Analyzer for Isobaric Mass Tag Proteome Quantification Experiments *J. Prot. Res.*. PMID: 28418254

2017 Tien, J.F., Mazloomian, A., Cheng, S.G., **Hughes, C.S.** *et al.* CDK12 regulates alternative last exon mRNA splicing and promotes breast cancer cell invasion *Nucleic Acids Res.*. PMID:28334900

2017 Funnell, T., Tasaki, S., Oloumi, A., Araki, S., Kong, E., Yap, D., Nakayama, Y., **Hughes, C.S.** *et al.* CLK-dependent exon recognition and conjoined gene formation revealed with a novel small molecule inhibitor *Nat. Commun.*.PMID: 28232751

2016 **Hughes, C.S.**, McConechy, M., Cochrane, D., Nazeran, T., Karnezis, A., Huntsman, D., Morin, G. Biomarker Discovery from High Resolution Proteomic Analysis of Fixed Ovarian Tumor Tissue Samples. *Scientific Reports*. PMID: 27713570

2016 Virant-Klun, I., Leicht, S., **Hughes, C.S.**, Krijgsveld, J. Identification of maturation-specific proteins by single-cell proteomics of human oocytes. *Mol. Cell. Proteomics* PMID: 27215607

Patents

2014 **Title:** Proteomic sample preparation using paramagnetic beads

Inventors: Hughes, C.S.*, Krijgsveld, J., Steinmetz, L.

Publication number: WO2015118152A1, US20170074869A1, CA2938907A1, EP3102612A1

Filing date: 2015-02-09

* - denotes majority inventor

Professional Experience

2014–2018 **Group Leader and Proteomics Platform Manager**

British Columbia Genome Sciences Centre

Development, execution, analysis, and management of research projects utilizing proteomics in a diverse array of clinical experimental models, from large-scale patient cohort profiling to precision medicine clinical cancer trials.

2012–2014 **EIPOD Post-Doctoral Researcher**

European Molecular Biology Laboratory

In-depth insight into the multi-layered regulation of cellular phenotype making use of protein turnover data acquired across a population of >200 individual yeast segregants.

2006–2006 **Research Technician**

Merck Frosst Canada

Worked on validating a new mass spectrometer ion source based on thermal desorption.

2006–2006 **Research Technician**

Radient Technologies Inc.

Worked on projects related to utilizing large-scale strategies to purify active compounds from natural products.

2004–2005 **Research Technician**

MDS Sciex

Worked on projects related to profiling carcinogenic food dyes and excipient analysis of analgesic drugs.

2004–2004 **Research Technician**

Agriculture and Agri-Food Canada

Worked on projects related to profiling resistance of soybean varities to different pathogens.

Education

2007–2012	**PhD in Biochemistry, Western University, Canada**
	Thesis title: Proteomics of Human Stem Cell Derived Matrices
2002–2007	Honors Bachelor of Science in Biology, University of Waterloo, Canada

References

Additional references available upon request.