

# Victor Yuan

PHD CANDIDATE

Genome Sciences and Technology, UBC. Vancouver, Canada

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## Skills

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### DRY

- DNA methylation microarray, RNA expression (sequencing/microarray), Genotyping microarray analysis
- Supervised machine learning, Regression analysis, Data cleaning, Data visualization
- R, Bash
- Tidyverse, Rmarkdown, ggplot2, Git

### WET

- DNA extraction, Gel electrophoresis, PCR, primer design
- Genotyping, Sequencing, Microarray prep

## Education

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### PhD, Genome Sciences and Technology

UNIVERSITY OF BRITISH COLUMBIA

2016 – Present

### Bachelor of Science (Honours), Cell and Molecular Biology

CONCORDIA UNIVERSITY

2011 – 2016

## Research

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### Graduate Student

ROBINSON LAB

University of British Columbia

2016–Present

- Using genomics to investigate environmental and genetic influences on perinatal health
- Modelling ethnicity using machine learning applied to epigenomic data
- Conducted epigenome- and transcriptome- wide association studies using public and private repositories

### Molecular Biodiversity Lab Assistant

MARTONE LAB

University of British Columbia

2016–2017

- Characterized the impact of weather changes on keystone species lost among the coast of northern BC
- Processed over 300 algal DNA specimens and applied BLAST for species identification

### Undergraduate Honours Thesis

WHITEWAY LAB

Concordia University

2014–2016

- Developed a CRISPR gene-fusion-insertion protocol in the unicellular fungal species *C. albicans*

## Teaching

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### Graduate Student Mentor

UNIVERSITY OF BRITISH COLUMBIA

2018–Present

- Mentored 2 undergraduate and 1 graduate students 3-4 month long genomic data analysis research projects

### Stats Support Group Member

BC CHILDREN'S HOSPITAL RESEARCH INSTITUTE

2017–2018

- Helped develop an on-site network of data analysts

### R Programming Help Session Host

BC CHILDREN'S HOSPITAL RESEARCH INSTITUTE

2017–2018

- Hosted a bimonthly 1-hour help session for onsite staff and trainees to address data analysis and programming needs

### High School Tutor

UNIVERSITY OF BRITISH COLUMBIA

2017–2018

- Tutored grades 10-12 in Math, English, Chemistry, Biology and general science

## Awards

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2019 (\$750 CAD) Top 3 Talk for PhD category, Healthy Starts Research Day  
 2018 (\$500 USD) Y.W. (Charlie) Loke Award for Early Career Researchers, International Federations of Placenta Association  
 2018 (\$750 CAD) Best Poster for Master's category, Healthy Starts Research Day  
 2018 (\$50 CAD) Top 3 Talk for Masters category, Healthy Starts Research Day  
 2016 (\$17500 CAD, DECLINED) NSERC Canada Graduate Scholarships-Master's Program, Concordia University  
 2016 (\$17500 CAD, DECLINED) NSERC Canada Graduate Scholarships-Master's Program, University of Victoria  
 2016 (\$6000 CAD, DECLINED) Concordia University Special Entrance Award, Concordia University  
 2015–2016 Dean's list (GPA > 3.75 / 4.25), Concordia University  
 2015 (\$5625 CAD) Concordia Undergraduate Summer Research Award, Concordia University  
 2014–2015 Dean's list (GPA > 3.75 / 4.25), Concordia University  
 2013–2014 Dean's list (GPA > 3.75 / 4.25), Concordia University

## Publications

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1. Yuan, V, EM Price, GF Del Gobbo, S Mostafavi, B Cox, AM Binder, KB Michels, C Marsit, and WP Robinson (2019). Accurate ethnicity prediction from placental DNA methylation data. *bioRxiv*, 618470.
2. Treissman, J, V Yuan, J Baltayeva, HT Le, B Castellana, WP Robinson, and AG Beristain (2019). Low oxygen enhances trophoblast column growth by potentiating the extravillous lineage and promoting LOX activity. *bioRxiv*, 669796.
3. Konwar, C, G Del Gobbo, V Yuan, and WP Robinson (2019). Considerations when processing and interpreting genomics data of the placenta. *Placenta*.
4. Robinson, WP, MS Peñaherrera, C Konwar, V Yuan, and SL Wilson (2019). "Epigenetic Modifications in the Human Placenta". In: *Human Reproductive and Prenatal Genetics*. Elsevier, pp.293–311.
5. Acharya, G, M Bartolomei, AM Carter, L Chamley, CF Cotton, J Hasegawa, Y Hasegawa, S Hayakawa, M Kawaguchi, C Konwar, et al. (2019). IFPA meeting 2018 workshop report I: Reproduction and placentation among ocean-living species; placental imaging; epigenetics and extracellular vesicles in pregnancy. *Placenta*.
6. Robinson, W, G Del Gobbo, V Yuan, EM Price, C Konwar, M Penaherrera, V Martinez, W Lam, and A Beristain (2018). Assessing Genomic Variation in the Human Placenta: Potential and Limitations. In: *Placenta*. Vol. 69. Elsevier, pp.E2–E2.