

MICHAEL GEUENICH

Curriculum vitae

PERSONAL INFORMATION

<i>Citizenship</i>	Germany
<i>Email</i>	michael.geuenich@questu.ca
<i>Website</i>	www.michaelgeuenich.com
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EDUCATION

	2020	Quest University Canada
<i>Bachelor of Arts and Science</i>	<i>Computational Biology</i>	
		Thesis: <i>Using Algorithms to Understand the Human Genome</i>
		Description: In this thesis I conducted a phylogenetic analysis of two ribosome maturation genes and their involvement in disease, designed and piloted a study geared to teach computational biology to undergraduate biology majors and explored genomic binding patterns of the MYC transcription factor network.
		Advisor: Prof. Marina Turlakis

SKILLS

<i>Advanced</i>	R
<i>Intermediate</i>	Python, Git, SQL
<i>Basic</i>	Shell Scripting, Snakemake, LaTeX, PyRosetta
<i>Bioinformatics tools</i>	Bowtie 2, MACS 2, Samtools, ngs.plot

WORK EXPERIENCE

	<i>May 2020–Present</i>	Pre-Doctoral Summer Student
<i>University of Toronto, LTRI</i>	<i>Toronto, Canada · Campbell Lab</i>	Analysis of imaging mass cytometry breast cancer data using machine learning.
	<i>June 2019–May 2020</i>	Undergraduate Research Assistant
<i>Fred Hutchinson Cancer Research Center</i>	<i>Seattle, USA · Eisenman Lab</i>	Analysis of ChIP-Seq and CUT&RUN NGS data pertaining to the MYC transcription factor network. Familiarity with western blotting, chromatin preparation for ChIP-Seq, fixing cells for Hi-C and Flow Cytometry.
	<i>Sept. 2017–May 2019</i>	Research Assistant & Research Fellow
<i>Quest University Canada</i>	<i>Squamish, Canada · Turlakis Lab</i>	Analysis of public sequence data for the phylogenetic analysis of ribosome maturation genes and their involvement in Shwachman-Diamond Syndrome. Homology search, sequence alignment, phylogenetic tree construction & protein visualization. Awarded paid Research Fellowship (Summer 2018) to continue this research.

Oct. 2016–Aug. 2018 **Data Analyst Coordinator**
Quest University
Canada
Squamish, Canada · *Communications & Development Office*
 Organized the university's donation data and imported it into a single database.

Mar. 2016–Aug. 2016 **Enterprise Account Manager**
BlackBerry
Barcelona, Spain · *Marketing & Sales (software)*
 Responsible for generating \$775,000/year from new and existing customers.

Oct. 2016–Feb. 2016 **Business Development Executive**
Riverbed
Barcelona, Spain · *Marketing & Sales*
 Communicated with IT executives to solve critical infrastructure problems.

May. 2014–July 2015 **CEO & Co-Founder**
BioEnvío
Barcelona, Spain
 Built an online shop to distribute organic food across the Spanish peninsula.

AWARDS

2020 · Keystone Distinction Award–Thesis award for the top 10% of students
 2019 Spring · Presidential Honours–Awarded to the top 10% of students
 2018 Fall · Presidential Honours
 2018 Spring · Presidential Honours
 2016-2020 · Quest University Canada Presidential Scholarship, CAD\$32,000

TEACHING

Sept. 2019 **Teaching Assistant**
Molecular
Genetics
Squamish, Canada
 Created a UCSF *Chimera* dry lab to predict the effect of mutations on a protein interaction. The assignment was designed to ease students into using software and included usage of the command line.

April 2019 **Guest Lecturer**
Linear Algebra
Squamish, Canada
 Lecture on the mathematics of PCA, using it in R, and applications in genomics.

Oct. 2018–Nov. 2018 **Guest Lecturer & Teaching Assistant**
Ecological
Genomics
Squamish, Canada
 Lecture on Multiple Sequence Alignments using MUSCLE. Teaching assistant for the R based dry lab.

OUTREACH & ACADEMIC LEADERSHIP

Momenta Sept. 2018–May 2019 · Co-Editor in Chief · Quest's Academic Journal

Quest Biomedical
Journal Club Sept. 2017–May 2019 · Board Member & President

Stand-Up Science Dec. 2018 & April 2019 · Co-Founder & Organizer · Science outreach event

Momenta Dec. 2017–Aug. 2018 · Peer-reviewer

Our_Futures Mar. 2019 · Topic Editor (Biology) · Academic Conference

PUBLICATIONS

- Cancer Cell* *May 2020* **MAX Functions as a Tumor Suppressor and Rewires Metabolism in Small Cell Lung Cancer**
Arnaud Augert, Haritha Mathsyaraja, Ali H. Ibrahim, Brian Freie, **Michael J. Geuenich**, Pei-Feng Cheng, Sydney P. Alibeckoff, Nan Wu, Joseph B. Hiatt, Ryan Basom, Adi Gazdar, Lucas B. Sullivan, Robert N. Eisenman, David MacPherson
- In preparation* **Loss of MGA mediated Polycomb repression leads to tumor progression and invasiveness**
Haritha Mathsyaraja, Ekaterina Babaeva, Emily Eastwood, Jonathen Catchpole, **Michael J. Geuenich**, Pei-Feng Cheng, Brian Freie, Nan Wu, Kumud R. Poudel, McGarry Houghton, Yuzuru Shiio, David P. MacPherson, Robert N. Eisenman.
- Momenta* *April 2019* **How computation and a rare disease can teach us about Basic Biology and Cancer**
Michael Geuenich, Johanna Rommens, Marina Turlakis
- Squamish Chief* *Oct. 2018* **"Regarding Moustaches"**
Michael J. Geuenich Op-ed about cancer awareness and funding allocation in the local newspaper.

PRESENTATIONS

- BC Cancer Summit* *Nov. 2019* **An activating point mutation in Myc (T58A) mitigates ER stress**
Michael J. Geuenich, Brian Freie, Patrick Carroll, Vijay Ramani, Robert N. Eisenman.
- BC Cancer Summit* *Nov. 2018* **Identifying differences in the Shwachman-Diamond syndrome associated gene SBDS across species**
Michael J. Geuenich, Johanna Rommens, Marina Turlakis
- Quest Scholarship Symposium* *Nov. 2018* **How computation and a rare disease can teach us about Basic Biology and Cancer**
Michael J. Geuenich, Johanna Rommens, Marina Turlakis

OTHER

- Languages*
- GERMAN · Mothertongue
 - SPANISH · Fluent
 - ENGLISH · Fluent
 - CATALAN · Basic

REFERENCES

- Dr. Marina Turlakis** · Mentor & Professor, Molecular Genetics, Quest University Canada
- Dr. Richard Hoshino** · Professor, Mathematics & Computer Science, Quest University Canada
- Dr. Robert N. Eisenman** · Professor, Fred Hutchinson Cancer Research Center

Contact information provided upon request