Landon J. Getz

PhD Candidate
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Landon Getz is a Ph.D. Candidate in the Department of Microbiology and Immunology at Dalhousie University. Landon has a Bachelor of Science Honours degree as well as a certificate in Genetics from Dalhousie University. He is a Vanier Scholar, Killam Laureate, and a member of the Chief Science Advisor's inaugural youth council. Landon is an award-winning educator, with a deep focus on enhancing equity, diversity, and inclusion in the classroom through Universal Design for Learning, and by recognizing the unique struggles of marginalized and underrepresented students.

Landon has a keen interest in understanding the microbial underpinnings of pathogenesis and the evolution of pathogenesis in environmental organisms. Through this interest, Landon explores the pathogenecity and environmental survival of *Vibrio parahaemolyticus* and the genetics of T3SS biogenesis in both *V. parahaemolyticus* and Enteropathogenic *E. coli*. Landon is also deeply interested in the intersections between Science and Soceity, and uses this interest to pursue the ethical and policy implications of new and emerging medical and genetic technologies, such as CRISPR/Cas9. Consequently, Landon has published several peer-reviewed journal articles and commentaries on both microbial genetics and pathogenesis, as well as in bioethics.

Education

Faculty of Medicine, Dalhousie University, Ph.D. in Microbiology & Immunology — Enrolled

Centre for Learning and Teaching, Dalhousie University, Certificate in University Teaching and Learning — Enrolled

Faculty of Science, Dalhousie University, B.Sc. in Microbiology & Immunology — 2017
First Class Honours - cGPA > 3.7
Department of Microbiology and Immmunology Honours Student Research Prize

Faculty of Science, Dalhousie University, Certificate in Genetics — 2017

Teaching and Course-Design Experience

Teaching Philosophy

"The ultimate goal of farming is not the growing of crops, but the cultivation and perfection of human beings."

- Masanobu Fukuoka, Farmer and Philosopher

As an educator, I consider teaching to be like farming. As settlers, both sides of my family have farmed land in Canada they moved onto as part of the colonization of The West. Reflecting on this profession and on my family's experiences has given me significant guidance in my teaching career thus far. In line with how Mr. Fukuoka understands the goals of farming, I believe that education's ultimate goal is the cultivation and perfection of human beings. With that in mind, my teaching philosophy broadly covers three areas:

Nuturing Students to grow,
Fostering Diversity and Inclusivity, and
Building Social Good through Education

For a complete teaching philosophy, please visit: http://landongetz.com

Courses

Course Developer, MICI2100DE — Winter 2021
Dalhousie University

Online Module Developer, CHEM 1011/1021 and CHEM 1012/1022 — June 2020
Dalhousie University

Course-Designer & Teaching Assistant, BIOL3037: Life Rewritten — Winter 2020/Winter 2021
Dalhousie University

Part Time Academic, CHEM1011/1021 and CHEM 1012/1022 — Fall/Winter 2018/2019
Dalhousie University

Graduate Student Mentor, Dalhousie international Genetically Engineered Machine (iGEM) — Summer/Fall 2018
Dalhousie University

Senior Chemistry Resource Centre Assistant, CHEM 1011/1021 and CHEM 1012/1022 — Winter 2017 - Fall 2018
Dalhousie University

Teaching Assistant, MICI 2100 — Fall 2017
Dalhousie University

Bioinformatics and Web Design Mentor, Dalhousie iGEM — Summer 2017
Dalhousie University

Chemistry Resource Centre Assistant, CHEM 1011/1021 and CHEM 1012/1022 — Fall 2015 - Fall 2016
Dalhousie University

Laboratory Supervision Summary:

Honours Students Supervised: 2
Summer Students Supervised: 8

Awards

Career Total: $326,750
Significant Awards are in Bold Face

2020 CIHR Silver Award - Canadian Student Health Research Forum	$250 CAD Award
Nominated for: Dalhousie Impact Awards 2020: Outstanding Student of Distinction	Not Awarded
Nominated for: 2020 Dalhousie's Board of Governors Award	Not Awarded
People's Choice Award at the 8th Internation Conference on the Biology of Vibrios	$200 CAD Award
2019 President's Graduate Student Teaching Assistant Award	$500 CAD Award
2019 PREP Graduate Student Research Day Platform Presentation Award	$200 CAD Award
2019 Faculty of Medicine Excellence in Research Award	$1000 CAD Award
2018/2019 Vanier Canadian Graduate Scholarship	$150,000 CAD Award
2019 Killam Graduate Scholarship	$90,000 CAD Award
2019 Dalhouise University Faculty of Medicine Excellence in Research Award	$1,000 CAD Prize
2019 Alexander Graham Bell Canadian Graduate Scholarship - Honourary Doctoral Recipient	$35,000 CAD Award
HHMI Tuition Scholarship, Cold Spring Harbor Laboratories Advanced Bacterial Genetics	$1500 USD Award
2018 Nova Scotia Health Research Foundation Scotia Scholars Award	$10,000 CAD Award
2018 Alexander Graham Bell Canadian Graduate Scholarship - Masters Recipient	$17,500 CAD Award
2018 Nova Scotia Graduate Scholarship	$10,000 CAD Award
2017 Award for Excellence in Undergraduate Honours Research	$100 CAD Award

2017 Nova Scotia Graduate Scholarship — $10,000 CAD Award

2017 Faculty of Science Undergraduate Research Prize

2017 Honours Student Prize — $100 CAD Award

2016/2017 Academic Year – Faculty of Science Dean's List

2016 NSERC University Summer Research Award — $6,000 CAD Award

2015/2016 Academic Year – Faculty of Science Dean's List

2015 Dalhousie University In-Course Scholarship — $250 CAD Award

2014/2015 Academic Year – Faculty of Science Dean's List

2013 Fall – Faculty of Science Dean's List

2013 Dalhousie University Entrance Scholarship — $750 CAD Award

2013 Alexander Rutherford Scholarship — $2,500 CAD Award

Publications

Career Total: 8
43 Citations; h-index: 5 (as per Google Scholar)

Journal Articles

Corresponding Author[#] | *Equal Contribution*[*]

1. **Getz, L.J.**, Dellaire, G.[#] (2020). "Back to Basics: Application of the 4-principle approach to bioethics to heritable genome editing." Science and Engineering Ethics. DOI: 10.1007/s11948-020-00226-0.
2. **Getz, L. J.**, Runté, C., Rainey, J., Thomas, N.A.[#] (2019). "Tyrosine phosphorylation as a widespread regulatory mechanism in prokaryotes." Journal of Bacteriology. DOI: 10.1128/JB.00205-19.
3. Thornbury, M., Sicheri, J., Slaine, P.D., **Getz, L. J.**, Finlayson-Trick, E.C.L., Cook, J., Guinard, C., Boudreau, N., Jakeman, D., Rohde, J.R., McCormick, C.[#] (2018). "Characterization of novel lignocellulose-degrading enzymes from the porcupine microbiome using synthetic metagenomics" PLoS One. DOI: 10.1371/journal.pone.0209221.
4. **Getz, L.J.**[#], Dellaire, G.[#] (2018). "Angels and Devils: Dual-Use in Biotechnology." Trends in Biotechnology. DOI: 10.1016/j.tibtech.2018.07.016.
5. Runté, C., Jain, U., **Getz, L.J.**, Secord, S., Kuwae, A., Abe, A., Leblanc, J., Stadnyk, A.W., Kaper, J.B., Hansen, A.M., Thomas, N.A.[#] (2018). "Tandem tyrosine phosphosites in the enteropathogenic Escherichia coli chaperone CesT are required for differential type III effector translocation and virulence." Molecular Microbiology. DOI: 10.1111/mmi.13948.
6. **Getz, L.J.**, Thomas, N.A.[#] (2018) "The Transcriptional Regulator HlyU is a Positive Regulator for Expression of exsA Leading to Type III Secretion System-1 Activation in Vibrio parahaemolyticus" Journal of Bacteriology. DOI: 10.1128/JB.00653-17.
7. **Getz, L.J.**[*], Finlayson-Trick, E.C.L.[*], Slaine, P.D.[*], Thornbury, M., Lamourerux, E., Cook, J., Langille, M.G.I., Murray, L.E., McCormick, C., Rohde, J.R., Cheng, Z.[#] (2017). "Taxonomic differences of gut microbiomes drive cellulolytic enzymatic potential within hind-gut fermenting mammals." PLoS One. DOI: 10.1371/journal.pone.0189404.

Theses

10. **Getz, L.J.** (2017) "A Genetic Switch Controls the Type III Secretion System Master Regulator, ExsA, in *Vibrio parahaemolyticus* RIMD2210633". *B.Sc (Hons).* Dalhousie University, Halifax, NS, Canada.

Commentary

1. **Getz, L.J.**, Baylis, F. (2020). Canada should reject the idea of deliberately infecting vaccine volunteers, PolicyOptions.ca.
2. Baylis, F., **Getz, L.J.** (2020). Why federal government should reject human challenge trials for COVID-19 vaccine, CBC Opinion.
3. Qaiser, F., Morriseau, T., Rilling, M., Cartile, A., Sung, M., **Getz, L.J.**, Boulanger, M-E. (2020). Envisioning A Post-Pandemic Future in the Canadian Science Community: A Youth Perspective, Canadian Science Policy Conference 2020.
4. Baylis, F., **Getz, L.J.** (2020). Rush to risky chellenge trials is unethical, HealthyDebate.ca.
5. **Getz, L.J.** (2020). Rushing coronavirus vaccines and treatments could do more harm than good, TheConversation.ca, Republished in Everything Zoomer, and Dal News.
6. Kofler, N., **Getz, L.J.**, Baylis, F., Dellaire, G. (2019). Genetically modifying mosquitoes to control the spread of disease carries unknown risks, TheConversation.ca, republished in Salon, HalifaxToday.ca, SaltWire Newspapers, and Gannett Newspapers.
7. **Getz, L.J.**, Dellaire, G. (2019). Moratorium on Human Genome Editing: Time to Get It Right, The Hastings Center Forum Blog.
8. **Getz, L.J.**, Dellaire, G. (2019). CRISPR gene editing: Why we need Slow Science, The Conversation.ca.
9. **Getz, L.J.** (2019). The "Value" of Consumer DNA Sequencing, Impact Ethics at Novel Tech Ethics.
10. **Getz, L.J.**, Dellaire, G., Baylis, F. (2018). Jiankui He: A Sorry Tale of High-Stakes Science, The Hastings Center Forum Blog.
11. Baylis, F., Dellaire, G., **Getz, L.J.** (2018). Why we are not ready for genetically designed babies, The Conversation: Canada Edition. Reprinted in: The National Post and the Halifax Chronicle Herald.
12. **Getz, L.J.** (2018). Thicker Than Water: Slow Movement on Blood Policy, Impact Ethics at Novel Tech Ethics.
13. **Getz, L.J.** (2018). The Privacy Implications of Human DNA Sequencing, Impact Ethics at Novel Tech Ethics.
14. **Getz, L.J.** (2017). A Reflection on Blood Donation Policy in Canada, Impact Ethics at Novel Tech Ethics.

Selected Presentations

1. Build Back Better: The Chief Science Advisor's Youth Council's Roundtables to Envision A Post-Pandemic Future in the Canadian Science Community. Canadian Science Policy Conference, University of Ottawa, Ottawa, QC. October 2020.
2. Functional genomics of Vibrio pathogenesis and environmental persistence. Canadian Student Health Research Forum, University of Manitoba, Regina, MB. August 2020.
3. Creating LGBTQ+ Inclusive Spaces for Equitable Active Learning. Dalhousie Conference on University Teaching and Learning, Dalhousie University, Halifax, NS. May 2019

Selected Knowledge Translation and Media

Dal News. CREATING A DEEPER SENSE OF COMMUNITY FOR LGBTQ+ SCIENTISTS. January 30th, 2020.
The Signal. Halifax event connects queer voices in STEM. January 20th, 2020.
CBC Nova Scotia's Information Morning Radio Show. QAtCanSTEM Colloquium: Being Queer in STEM. January 17th, 2020.
Halifax's The Coast. A first-of-its-kind queer STEM conference is in Halifax this weekend. January 16th, 2020.
The National Post. Breakthrough or a threat? Research on genetics of same-sex behaviour ignites ethical debate. December 6th, 2019.
HalifaxToday.ca. Halifax-based group building queer community in STEM fields. November 24th, 2019.
The Sheldon McLeod Show. QAtCanSTEM and Being a Queer Scientist. November 22nd, 2019.
Dal News. PRIDE IN STEM. July 25th, 2019.