



**The Faculty of Medicine of Harvard University
 Curriculum Vitae**

Date Prepared: 11/16/2021

Name: Luther Alex Liggett

Work Email: lliggett@broadinstitute.org

Education:

2019	PhD	Cell, Stem Cell, and Developmental Biology (James DeGregori)	University of Colorado School of Medicine
2012	MS	Biology	Case Western Reserve University
2009	BS	Biomedical Engineering	Case Western Reserve University

Postdoctoral Training:

10/2019-	Research Fellow	Hematology/Oncology (Vijay Sankaran)	The Broad Institute, Boston Children's
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Professional Societies:

2019-	American Association for Cancer Research
2017-	Genetics Society of America

Mentoring Summary:

Undergraduate Student 11/2021-
 High School Summer Student 5/2021-9/2021
 MD/PhD Rotation Student 1/2021-4/2021

Teaching Summary:

Updated October 2016

Guest Lecturer Stem Cell Biology Class Spring 2017-2019
 Teaching Assistant Human Physiology Spring 2012
 Teaching Assistant Human Anatomy Fall 2011

Editorial Activities:

Ad hoc Reviewer

Nature
 Nucleic Acids Research
 Cell Stem Cell
 Cell
 Cancer Discovery
 Blood Advances

Report of Funded and Unfunded Projects

Training Grants and Mentored Trainee Grants

2021-	Co-Investigator (PI: Vijay Sankaran) Harvard Medical School Pathophysiology of Human Blood Cells T32 Understanding the Role of CHEK2 in Promoting Hematopoietic Stem Cell Clonal Expansion
2019-2022	Co-Investigator (PI: Vijay Sankaran) Harvard Medical School Transfusion Medicine T32 Understanding the Role of CHEK2 in Promoting Hematopoietic Stem Cell Clonal Expansion
2014-2019	NIH F31 Co-Investigator (PI: James DeGregori) The Role of Trisomy 21 in Hematopoiesis and Leukemogenesis This project seeks to understand the role of trisomy 21 in promoting the process of leukemogenesis
2014	Linda Crnic Institute for Down Syndrome Research Co-Investigator (PI: James DeGregori) Downs Syndrome and Leukemogenesis This project seeks to understand the role of trisomy 21 in promoting the process of leukemogenesis

2018	Linda Crnic Institute for Down Syndrome Research Co-Investigator (PI: James DeGregori) Clonal Evolution in Down Syndrome This project seeks to understand the role of trisomy 21 in promoting the process of leukemogenesis
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Report of Scholarship

Peer reviewed scholarship in print or other media:

Research Investigations

Liggett LA, Sankaran VG. Patchwork Cancer Predisposition. *Cancer Discov.* **2022**;12(4):889–891.

Liggett LA, Cato LD, Weinstock JS, et al. Clonal hematopoiesis in sickle cell disease. *JCI.* **2021**

Liggett, L.A., Galbraith, M.D., Smith, K.P., Sullivan, K.D., Granrath, R.E., Enriquez-Estrada, B., Kinning, K.T., Shaw, J.R., Rachubinski, A.L., Espinosa, J.M., et al. (**2021**). Precocious clonal hematopoiesis in Down syndrome is accompanied by immune dysregulation. *Blood Adv.* **5**, 1791–1796.

Liggett, L. Alexander, and Vijay G. Sankaran. "Unraveling hematopoiesis through the lens of genomics." *Cell* 182.6 (**2020**): 1384-1400.

Alexander Liggett, L., Voit, R.A., and Sankaran, V.G. (**2020**). Sowing the Seeds of Clonal Hematopoiesis. *Cell Stem Cell* **27**, 195–197.

Rozhok, A. I., Silberman, R. E., Higa, K. C., **Liggett, L. A.**, Amon, A., & DeGregori, J. (**2020**). A somatic evolutionary model of the dynamics of aneuploid cells during hematopoietic reconstitution. *Scientific reports*, 10(1), 1-10.

L. Alexander Liggett, Anchal Sharma, Subhajyoti De, James DeGregori (2019). FERMI: A novel method for sensitive detection of rare mutations in somatic tissue. *Genes, Genomes, and Genetics*

Liggett, L.A., and DeGregori, J. (2017). Changing mutational and adaptive landscapes and the genesis of cancer. *Biochim. Biophys. Acta.*

Aivazidis, S., Coughlan, C.M., Rauniyar, A.K., Jiang, H., **Liggett, L.A.**, Maclean, K.N., and Roede, J.R. (2017). The burden of trisomy 21 disrupts the proteostasis network in Down syndrome. *PLoS One* **12**, e0176307.

Sullivan, K.D., Lewis, H.C., Hill, A.A., Pandey, A., Jackson, L.P., Cabral, J.M., Smith, K.P., **Liggett, L.A.**, Gomez, E.B., Galbraith, M.D., et al. (2016). Trisomy 21 consistently activates the interferon response. *Elife* **5**.

Broome, A.-M., Ramamurthy, G., Lavik, K., **Liggett, A.**, Kinstlinger, I., and Basilion, J. (2015). Optical imaging of targeted β -galactosidase in brain tumors to detect EGFR levels. *Bioconjug. Chem.* 26, 660–668.

Parameswaran, N., Enyindah-Asonye, G., **Liggett, L.**, Shah, N., Bagheri, N., and Gupta, N. 2013. Spatial coupling of JNK activation to the B cell antigen receptor by tyrosine-phosphorylated ezrin. *J. Immunol.* 190:2017-2026.

Broome, A.-M., Lavik, K., Ramamurthy, G., **Liggett, L.A.**, Agnes, R.S., and Basilion, J.P. (2010). Abstract 4341: Tumor imaging via β -galactosidase fragment complementation with a multifunctional targeted-reporter complex. *Cancer Res.* 70, 4341–4341.

Silva, F., Bederman, I., **Liggett, A.**, and Cabrera, M. (2008). Effects of unloading (HS) and loading (exercise training) on overall work capacity in rats. *The FASEB Journal* 22, 121–121.

Thesis:

Identifying Rare Somatic Mutations As A Means Of Understanding Tissue Clonal Evolution

Abstracts, Poster Presentations and Exhibits Presented at Professional Meetings:

Poster Presentation Population, Evolutionary, and Quantitative Genetics Conference 2018

Poster Presentation Hematopoiesis Keystone Symposium 2016