

Charles J. Wolock

CONTACT INFORMATION	Department of Biostatistics, Box 357232 University of Washington Seattle, WA 98195	(913) 486-1659 cwolock@uw.edu student webpage
RESEARCH INTERESTS	Missing data, decision theory, statistical genetics, longitudinal data	
EDUCATION	University of Washington , Seattle, WA Ph.D., Biostatistics, <i>Expected</i> : Summer 2023 Harvard University , Cambridge, MA B.A., Organismic and Evolutionary Biology, May 2015 Language citation: Spanish • <i>Summa cum laude</i> • Highest Honors in department • Honors thesis: Exploring the functional diversity of microbial communities within carnivorous pitcher plants • Advisors: Anne Pringle, Ph.D. and Naomi Pierce, Ph.D.	
RESEARCH EXPERIENCE	Independent Study Department of Biostatistics University of Washington Supervisor: Lurdes Inoue, Ph.D. Independent Study Department of Biostatistics University of Washington Supervisor: Mauricio Sadinle, Ph.D. Research Assistant Department of Biostatistics University of Washington Supervisor: Bruce S. Weir, Ph.D. Research Staff Associate Institute for Genomic Medicine Columbia University Medical Center Supervisors: David B. Goldstein, Ph.D and Andrew S. Allen, Ph.D Undergraduate Researcher Department of Organismic and Evolutionary Biology Harvard University Supervisors: Anne Pringle, Ph.D. and Naomi Pierce Ph.D. Undergraduate Researcher Department of Earth and Planetary Sciences Harvard University Supervisor: Erik Sperling, Ph.D. Summer Scholar Stowers Institute for Medical Research Supervisor: Matthew Gibson, Ph.D.	June 2019 to present April 2019 to present Sept 2018 to present Nov 2016 to July 2018 Sept 2012 to May 2015 Sept 2012 to Dec 2013 June 2013 to Aug 2013
TEACHING EXPERIENCE	Student Facilitator Harvard University LS1A: An Integrated Introduction to the Life Sciences	Fall 2014

REFEREED
JOURNAL
PUBLICATIONS

1. Sperling E.A., **Wolock C.J.**, Morgan A.S., Gill B.C., Kunzmann M., Halverson G.P., Macdonald F.A., Knoll A.H., Johnston D.T. Statistical analysis of iron geochemical data suggests limited late Proterozoic oxygenation. *Nature* 523: 451–454, 2015.
2. Raghavan N.S., Brickman A.M., Andrew H., Manly J.J., Schupf N., Lantigua R., The Alzheimer’s Disease Sequencing Project, **Wolock C.J.**, Kamalakaran S., Petrovski S., Tosto G., Vardarajan B.N., Goldstein D.B., Mayeux R. Whole exome sequencing in 20,197 individuals identifies ultra-rare SORL1 loss-of-function variants in late-onset Alzheimer’s disease. *Annals of Clinical and Translational Neurology* 5(7): 832-842, 2018.
3. Bittleston L.S., **Wolock C.J.**, Bakhtiar E.Y., Chan X.Y., Chan K.G., Pierce N.E., Pringle A. Convergence between the microcosms of Southeast Asian and North American pitcher plants. *eLife* 7, 2018.
4. Hayeck T.J., Stong N., **Wolock C.J.**, Copeland B., Kamalakaran S., Goldstein D.B., Allen A.S. Improved Pathogenic Variant Localization using a Hierarchical Model of Sub-regional Intolerance. *American Journal of Human Genetics* 104(2): 299-309, 2019.
5. **Wolock C.J.**, Stong N., Ma F., Nagasaki T., Lee W., Tsang S.H., Kamalakaran S., Goldstein D.B., Allikmets R. A case-control collapsing analysis identifies retinal dystrophy genes associated with ophthalmic disease in patients with no pathogenic *ABCA4* mutations. *Genetics in Medicine* 21: 2336-2344, 2019.
6. Gelfman S., Dugger S.A., Moreno C.A.M., Ren Z., **Wolock C.J.**, Shneider N.A., Phatnani H., Cirulli E.T., Lasseigne B.N., Harris T., Maniatis T., Rouleau G.A., Brown R.H., Gitler A.D., Myers R.M., Petrovski S., Allen A.S., Harms M.B., Goldstein D.B. A new approach for rare variation collapsing on functional protein domains implicates specific genic regions in ALS. *Genome Research* 29(5): 809-818, 2019.
7. Cameron-Christie S., **Wolock C.J.**, Groopman E., Petrovski S., Kamalakaran S., Povysil G., Zhang M., Fleckner J., March R.E., Gelfman S., Marasa M., Li Y., Sanna-Cherchi S., Kiryluk K., Allen A.S., Fellström B., Haefliger C., Platt A., Goldstein D.B., Gharavi A. Exome-based rare-variant analyses in chronic kidney disease. *Journal of the American Society of Nephrology* 30(6):1109-1122, 2019
8. Ma C.J., **Wolock C.J.**, Stong N., Nagasaki T., Lee W., Goldstein D.B., Allikmets R. Case-control collapsing analysis identifies genes mimicking Stargardt/ABCA4 disease. *Investigative Ophthalmology & Visual Science* 60(9): 2935-2935, 2019.

POSTERS

1. **Wolock C.J.**, Bittleston L.S., Pierce N.E., Pringle A. Nitrogenase genes in carnivorous plant microbial communities. Microbial Sciences Initiative Research Symposium. Cambridge, MA. September 2014.
2. **Wolock C.J.**, Bittleston L.S., Pierce N.E., Pringle A. Carnivorous pitchers of *Nepenthes* with less acidic fluid house nitrogen-fixing bacteria. Harvard University Organismic and Evolutionary Biology Thesis Symposium. Cambridge, MA. May 2015.
3. **Wolock C.J.**, Kamalakaran S., Goldstein D.B., Allen A.S. A test for balanced coverage across cases and controls as a qualifying criterion in collapsing analysis. Human Genetics in NYC Conference. New York, NY. September 2017.

AWARDS	Harvard University	
	• Phi Beta Kappa	2015
	• Herchel Smith Research Fellowship	2014
	• Microbial Sciences Initiative Research Fellowship	2014
	• John Harvard Scholar	2012-2013
	• National Merit Scholarship	2011
SERVICE	University of Washington	
	• NIH Statistical Genetics Training Grant	2018-present
	University of Washington Department of Biostatistics	
	• Biostatistics Activities and Events Squad (department liaison)	2019-present
	• Peer mentor program	2019-present
	• Equity, Diversity, and Inclusion Committee	2019-present
SKILLS	• Student-Faculty-Staff Committee	2019-present
	Computer programming:	
	• Python, R, Bash, SQL, L ^A T _E X	
	Bioinformatics tools:	
	• samtools, bedtools, bcftools, vcftools, Picard tools, BWA, BMAP	
	Languages:	
	• English (native), Spanish (proficient)	