

Daniel B. Munro

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EDUCATION

2019 **Ph.D.** Quantitative and Computational Biology, Princeton University
Thesis: Revealing disease-relevant alteration patterns through data
aggregation. Advisor: Mona Singh
2013 **B.S.** Biology, University of North Texas

RESEARCH EXPERIENCE

03/2020–Present **Postdoctoral Fellow**, Pejman Mohammadi, Scripps Research and
Postdoctoral Scholar, Abraham Palmer, UC San Diego
03/2019–10/2019 **Postdoctoral Associate**, Christine Vogel, New York University
01/2014–12/2018 **Graduate Research Assistant**, Mona Singh, Princeton University
01/2011–05/2013 **Undergraduate Research Assistant**, Qunfeng Dong, University of North
Texas

PEER-REVIEWED PUBLICATIONS

AS Chitre, O Polesskaya, **D Munro**, R Cheng, P Mohammadi, K Holl, J Gao, et al. (2023).
Exponential increase in QTL detection with increased sample size. *GENETICS*. iyad054.

S Fowler, T Wang, **D Munro**, A Kumar, AS Chitre, TJ Hollingsworth, A Garcia Martinez, et al.
(2023). Genome-wide association study finds multiple loci associated with intraocular pressure
in HS rats. *Frontiers in Genetics*. 13.

D Munro, T Wang, AS Chitre, O Polesskaya, N Ehsan, J Gao, A Gusev, LC Solberg Woods,
LM Saba, H Chen, AA Palmer, P Mohammadi (2022). The regulatory landscape of multiple
brain regions in outbred heterogeneous stock rats. *Nucleic Acids Research*. 50 (19): 10882-
10895.

JT Ash*, G Darnell*, **D Munro***, BE Engelhardt (2021). Joint analysis of gene expression levels
and histological images identifies genes associated with tissue morphology. *Nature*
Communications. 12 (1), 1–12.

* These authors contributed equally

D Munro, M Singh (2020). DeMaSk: A deep mutational scanning substitution matrix and its use
for variant impact prediction. *Bioinformatics*. 36 (22–23): 5322–5329.

GXL Li, **D Munro**, D Fermin, C Vogel, H Choi (2020). A protein-centric approach for exome
variant aggregation enables sensitive association analysis with clinical outcomes. *Human*
Mutation. 41 (5): 934–945.

D Munro, D Ghera, M Singh (2018). Two critical positions in zinc finger domains are heavily mutated in three human cancer types. *PLoS Comput Biol.* 14 (6): e1006290.

C Cohen, E Toh, **D Munro**, Q Dong, H Hawlena (2015). Similarities and seasonal variations in bacterial communities from the blood of rodents and from their flea vectors. *The ISME Journal.* 2015-01-09.

Y Gavish, H Kedem, I Messika, C Cohen, E Toh, **D Munro**, Q Dong, C Fuqua, K Clay, H Hawlena (2014). Association of host and microbial species diversity across spatial scales in desert rodent communities. *PLoS ONE.* 9: e109677.

JS Kuehn, PJ Gorden, **D Munro**, R Rong, Q Dong, PJ Plummer, C Wang, GJ Phillips (2013). Bacterial community profiling of milk samples as a means to understand culture-negative bovine clinical mastitis. *PLoS ONE.* 8: e61959.

M Zhou, R Rong, **D Munro**, C Zhu, X Gao, Q Zhang, Q Dong (2013). Investigation of the effect of type 2 diabetes mellitus on subgingival plaque microbiota by high-throughput 16S rDNA pyrosequencing. *PLoS ONE.* 8: e61516.

H Hawlena, E Rynkiewicz, E Toh, A Alfred, LA Durden, MW Hastriter, DE Nelson, R Rong, **D Munro**, Q Dong, C Fuqua, K Clay (2013). The arthropod, but not the vertebrate host or its environment, dictates bacterial community composition of fleas and ticks. *The ISME Journal.* 7: 221-223.

K Revanna, **D Munro**, A Gao, C Chiu, A Pathak, Q Dong (2012). A web-based multi-Genome Synteny Viewer for customized data. *BMC Bioinformatics.* 13: 190.

PREPRINTS

RE Clifford, **D Munro**, D Dochterman, P Devineni, S Pyarajan, F Telese, P Mohammadi, AA Palmer, RA Friedman. GWAS of chronic dizziness in the elderly identifies significant loci implicating MLLT10, BPTF, LINC01225, and ROS1.
Preprint: <https://www.medrxiv.org/content/10.1101/2022.12.14.22283471v1>

HONORS & AWARDS

2019	Runner-up, Symbiosis Competition at Imagine Science Film Festival, New York, NY, in collaboration with Jin Angdoo
2013	National Science Foundation Graduate Research Fellowship
2013	Phi Kappa Phi National Fellowship (\$5000)

TEACHING EXPERIENCE

Spring 2016	Assistant in Instruction, An Integrated, Quantitative Introduction to the Natural Sciences II
Fall 2015	Assistant in Instruction, An Integrated, Quantitative Introduction to the Natural Sciences I

PRESENTATIONS

- 2022 “The regulatory landscape of multiple brain regions in outbred heterogeneous stock rats”, talk at the Complex Trait Consortium-Rat Genomics 2022 meeting, September 29, 2022
- 2021 “Identification of regulatory landscape in multiple brain regions of outbred heterogeneous stock rats”, talk at the Complex Trait Consortium-Rat Genomics 2021 meeting, September 1, 2021
- 2021, 2023 “Techniques for algorithmic graphics”, guest lecture for Honors Colloquium on Complex Systems, University of Nebraska Omaha, March 2, 2021 and March 28, 2023
- 2020 “Mapping eQTLs in five rat brain regions”, talk at the 6th Annual Retreat for P50 Center for GWAS in Outbred Rats, La Jolla, CA, November 2, 2020

PROFESSIONAL SERVICE & MEMBERSHIPS

Ad hoc reviewer: *Developmental Biology* (2019), *PLOS Computational Biology* (2020), *PLOS ONE* (2020), *BMC Bioinformatics* (2021), *Journal of Computational Biology* (2021)

American Society of Human Genetics (Since 2020)

International Society for Computational Biology (Since 2019)