

Daniel Munro

dmunro@princeton.edu · <https://danmun.ro>

Education

- 2019 **PhD in Quantitative and Computational Biology** · Princeton University
Thesis: Revealing disease-relevant alteration patterns through data aggregation
Adviser: Mona Singh
- 2013 **BSc in Biology** · University of North Texas
summa cum laude, Distinguished Honors Scholar
Thesis: Developing a density map-based visualization tool for metagenomics analysis
Adviser: Qunfeng Dong

Awards & Honors

- 2013 **National Science Foundation Graduate Research Fellowship**
- 2013 **Phi Kappa Phi National Fellowship**
- 2013 Outstanding Senior Award from UNT Department of Biological Sciences
1 of 2 recipients
- 2013 David B. Kesterson Award for Outstanding Student in the Honors College
(University of North Texas)
- 2012 Dean's List Scholarship
for achievement in the UNT College of Arts and Sciences
- 2012 Rollie and Sue Shafer Award
for achievement in the UNT Department of Biological Sciences
- 2011–2012 **UNT-HHMI Undergraduate Researchers Program**
Included funding from Howard Hughes Medical Institute for research and conference travel
- 2011–2012 UNT Multicultural Scholastic Award Program
Involved 40 hours of community service
- 2009–2013 **UNT Meritorious Scholarship for National Merit Finalists**

Publications

- Present **D Munro**, M Singh. A directional substitution matrix and its application to variant impact prediction. *In preparation*.
- Present J Ash, **D Munro**, G Darnell, B Engelhardt. Joint analysis of gene expression levels and histological images identifies genes associated with tissue morphology. *Under submission at Nature Communications*.
- 2018 **D Munro**, D Ghersi, M Singh (2018). Two critical positions in zinc finger domains are heavily mutated in three human cancer types. *PLoS Comput Biol*. 14(6): e1006290.
- 2015 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.
- 2014 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.
- 2013 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.
- 2013 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.
- 2012 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.
- 2012 H Hawlena, E Rynkiewicz, E Toh, A Alfred, LA Durden, MW Hastriter, DE Nelson, R Rong, **D Munro**, Q Dong, C Fuqua, K Clay (2012). The arthropod, but not the vertebrate host or its environment, dictates bacterial community composition of fleas and ticks. *The ISME Journal*. 7: 221-223.

Research

- 2014–2018 **Graduate Research Assistant** · Mona Singh, PhD · Princeton University
Conducted computational research focusing on cancer genomics and protein substitutions.
Thesis: Revealing disease-relevant alteration patterns through data aggregation
- 2011–2013 **Undergraduate Research Assistant** · Qunfeng Dong, PhD · University of North Texas
Projects included data analysis for microbiome studies and genomics software development.

Teaching & Activities

- Spring 2016 **Assistant in Instruction** · An Integrated, Quantitative Introduction to the Natural Sciences II (ISC 233)
Led precepts on programming and computer science.
- Fall 2015 **Assistant in Instruction** · An Integrated, Quantitative Introduction to the Natural Sciences I (ISC 231)
Led precepts on programming and computer science.
- 2012–2013 **Review session leader** · Organic chemistry I and II
Led weekly sessions with small groups of students in conjunction with the courses. Organized by professor Sushama Dandekar, PhD.
- 2011–2013 **Vice President, Historian** · Beta Beta Beta National Biological Honor Society
University of North Texas chapter

Presentations

- 2013-06-22 “Decoding DNA and its relation to diseases”
*Exhibit for special event · Perot Museum of Nature and Science · Dallas, Texas
Created posters and computer demonstrations and presented to museum guests.*
- 2013-04 “Microbiome studies and bioinformatics software development”
Poster · Texas Undergraduate Research Day at the Capitol · Austin, Texas
- 2013-04 “Developing a density map-based visualization tool for metagenomics analysis”
Talk · University Scholars Day · University of North Texas
- 2012-07 “A web-based multi-genome synteny viewer for customized data”
Poster · BIOCOMP’12: The International Conference on Bioinformatics & Computational Biology · Las Vegas, Nevada
- 2012-04 “Bioinformatic analysis of the bacterial communities in bovine mastitis samples”
Poster · University Scholars Day · University of North Texas

References

Mona Singh

Lewis-Sigler Institute for Integrative Genomics,
Department of Computer Science
Princeton University
Princeton, New Jersey
mona@cs.princeton.edu

Barbara Engelhardt

Department of Computer Science
Princeton University
Princeton, New Jersey
bee@princeton.edu

Dario Gherzi

School of Interdisciplinary Informatics
University of Nebraska Omaha
Omaha, Nebraska
dghersi@unomaha.edu