

# Dan Munro

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## 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

- 2019–Present **Postdoctoral Associate** · Christine Vogel, PhD · New York University  
Research focuses on alterations in protein sequence and abundance in disease.
- 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**

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### **Barbara Engelhardt**

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### **Dario Ghersi**

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