

MAYA BOSE

EDUCATION

University of Michigan, Ann Arbor <i>PhD, Computational Medicine and Bioinformatics</i>	Aug. 2021–
University of Arizona <i>BS with Honors, summa cum laude, Bioinformatics</i>	June 2021

RESEARCH EXPERIENCE

Graduate Student Research Assistant <i>PI: Dr. Stephen Parker</i> University of Michigan	March. 2022 – Present
<ul style="list-style-type: none">Performed randomized batch sorting, QC, clustering, differential cell type abundance analysis, and differential expression analysis of snRNAseq and snATACseq multiome libraries for HFpEF study in collaboration with Pfizer and Wake Forest UniversityBenchmarked differential gene expression tools DESeq2, MAST, and miloDE for use with several projectsPredicted the expression of CAGE-derived TSS in a massively parallel reporter assay from tissue-specific regulatory annotations using generalized linear models and elasticnet regressionCompleted preliminary exam with full pass June, 2023	
Graduate Rotation Student <i>PI: Ryan Mills</i> University of Michigan	Jan. 2022 – Mar. 2022
Graduate Rotation Student <i>PI: Lydia Freddolino</i> University of Michigan	Oct. 2021 – Dec. 2021
Undergraduate Researcher <i>PI: Rebecca Mosher</i> University of Arizona	May 2019 – May 2021
Undergraduate Researcher <i>PI: Aurelio José Figueredo</i> University of Arizona	Jan. 2018 – May 2021

PUBLICATIONS

- [1] **M. Bose**, A. Tovar, Y. Kyono, A. Varshney, J. O. Kitzman, and S. C. J. Parker. “Massively Parallel Reporter Assay Reveals Promoter-, Position-, and Strand-Specific Effects in Islet Transcription Start Sites”. In: (Submitting June 2025).
- [2] A. Tovar, Y. Kyono, K. Nishino, **M. Bose**, A. Varshney, S. C. J. Parker, and J. O. Kitzman. “Using a Modular Massively Parallel Reporter Assay to Discover Context-Specific Regulatory Grammars in Type 2 Diabetes”. In: *bioRxiv : the preprint server for biology* (2023). doi: 10.1101/2023.10.08.561391.

ORAL PRESENTATIONS

- [1] “Massively Parallel Reporter Assay Reveals Promoter-, Position-Dependent and Tissue-Specific Effects in Islet TSSs”. NHGRI Research Training & Career Development Meeting (Seattle, WA). Apr. 2024.
- [2] “Massively Parallel Reporter Assay Reveals Promoter-, Position-Dependent and Tissue-Specific Effects in Islet TSSs”. American Society of Human Genetics Annual Meeting (Los Angeles, CA). Oct. 2022.
- [3] “RNA-Directed DNA Methylation (RdDM)”. Undergraduate Biology Research Program Summer Presentation (Tucson, AZ). Aug. 2020. URL: <https://youtu.be/MVFeofaltJs>.

POSTER PRESENTATIONS

- [1] "Massively Parallel Reporter Assay Reveals Promoter-, Position-Dependent and Tissue-Specific Effects in Islet TSSs". American Diabetes Association Annual Meeting (Orlando, FL). June 2024.
- [2] "Massively Parallel Reporter Assay Reveals Promoter-, Position-Dependent and Tissue-Specific Effects in Islet TSSs". NHGRI Research Training & Career Development Meeting (Salt Lake City, UT). Apr. 2023.
- [3] "Massively Parallel Reporter Assay Reveals Promoter-, Position-Dependent and Tissue-Specific Effects in Islet TSSs". Department of Computational Medicine and Bioinformatics Annual Retreat Poster Session (Ann Arbor, MI). Sept. 2023.
- [4] "Massively Parallel Reporter Assay Reveals Promoter-, Position-Dependent and Tissue-Specific Effects in Islet TSSs". Department of Human Genetics and Department of Ecology Joint Retreat Graduate Student Poster Session (Ann Arbor, MI). Oct. 2023.
- [5] "Massively Parallel Reporter Assay Reveals Promoter-, Position-Dependent and Tissue-Specific Effects in Islet TSSs". American Society of Human Genetics Annual Meeting (Washington, D.C.). Nov. 2023.
- [6] "Massively Parallel Reporter Assay Reveals Promoter-, Position-Dependent and Tissue-Specific Effects in Islet TSSs". NHGRI Research Training & Career Development Meeting (Ann Arbor, MI). Oct. 2022.
- [7] "23-Nt sRNAs with 3' Terminal Untemplated Nucleotides Form a Small Subset of RDR2 Transcription Products". Undergraduate Biology Research Program Virtual Poster Conference (Tucson, AZ). Jan. 2020.
- [8] "Abundances of RdDM-Produced 23nt and 24nt sRNAs Vary Across Tissue Types in Brassica Rapa and Arabidopsis Thaliana". Undergraduate Biology Research Program Virtual Poster Conference (Tucson, AZ). Jan. 2019.

TEACHING EXPERIENCE

Girls Who Code Guest Speaker University of Michigan	Sept. 24, 2024
Think Tank Tutor University of Arizona	Aug. 2018 – May 2019
<ul style="list-style-type: none">• Tutored undergraduate students in College Algebra, Pre-Calculus, and Calculus• Obtained Level I International Tutor Training Program Certification	

SCHOLARSHIPS AND AWARDS

Excellence in Leadership Award Department Nominee <i>University of Michigan Bioinformatics</i>	Oct. 2023
Rackham Conference Travel Grant <i>University of Michigan</i>	Oct. 2023
Bioinformatics Student Service Award <i>University of Michigan Bioinformatics</i>	Oct. 2023
Rackham Conference Travel Grant <i>University of Michigan</i>	Oct. 2022
Genome Sciences Training Program T32 <i>National Human Genome Research Institute</i> Normally a 2-year grant, was awarded a 3rd year of support in recognition of scientific achievement and service to the program	July 2022 – July 2025
Benard Maas Fellowship <i>University of Michigan</i>	May. 2021
Da Vinci Award <i>University of Arizona Honors College</i>	Mar. 2021
Excellence in Undergraduate Research Award <i>University of Arizona Ecology and Evolutionary Biology</i>	Mar. 2021
Honors Legacy Award <i>University of Arizona</i>	Feb. 2020

SERVICE AND OUTREACH

Bioinformatics Graduate Student Association Executive Member Jan. 2022 – Present
University of Michigan

- Organize monthly community-building social events for graduate students. These events regularly draw 25-40 students in attendance
- Facilitate communication between the graduate students and faculty through town hall discussions and placement of students on department committees
- Identify and recruit students for placement in student organizations and department committees
- Promote the retention of a diverse cohort of graduate students by fostering an inclusive and supportive academic environment

UM Bioinformatics & PIBS Recruitment Host Jan. 2022 – Present
University of Michigan

- Host prospective graduate students across both virtual and in-person recruitment weekends
- Fulfilled duties as lead host for 2023, 2024. Served as point person during interview weekends in addition to regular responsibilities

DCMB Pi Day Potluck Committee Member 2025
University of Michigan

DCMB Retreat Committee Member 2023; 2024
University of Michigan

- Provided student input to the planning and organization of the yearly University of Michigan Department of Computational Medicine and Bioinformatics retreat over the course of several biweekly meetings.
- Organized and moderated a student-focused Q&A panel at the retreat
- Organized and led a social activity for the 90 student attendees at the retreat

DCMB Yearly Summer Picnic Committee Member 2023
University of Michigan

UA COVID-19 Vaccine POD Volunteer Mar. 2021 – May 2021
University of Arizona

UA Ecology & Evolutionary Biology Department Ambassador Jan. 2020 – May 2021
University of Arizona