

Manisha Munasinghe

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Professional Appointments and Education

Postdoctoral Associate: University of Minnesota, Twin Cities Jan 2021 — current
Department of Plant and Microbial Biology
Yaniv Brandvain and Nathan Springer Labs

Ph.D. Computational Biology: Cornell University 2015 — 2020
Computational and Experimental Analysis on the Consequences of Sexually Asymmetric Transmission with Mitochondrial-Nuclear Interactions
Advisor: Andrew G. Clark
Committee: Philipp Messer, Charles Aquadro

B.S. Mathematics: Michigan State University 2011 — 2015

Publications (Peer Reviewed and Preprints)

* denotes equal contribution

5. **Munasinghe M**, Nathan Springer, and Yaniv Brandvain. 2022. "Critical Role of Insertion Preference for Invasion Trajectory of Transposons." *Evol.* (In Review).

4. **Munasinghe M**, Ben C. Haller, and Andrew G. Clark. 2021. "Migration Restores Hybrid Incompatibility Driven by Nuclear-Mitochondrial Sexual Conflict." *Proc. R. Soc. B.*, 289 (1967): 20212561. <https://doi.org/10.1098/rspb.2021.2561>.

3. Holman A, **Manisha Munasinghe**, and Andrew G. Clark. 2020. "Natural Polymorphisms in Second-site Modifiers of *Drosophila C9orf72* Model for Amyotrophic Lateral Sclerosis." *Genetics*. (In Review).
 2. Ågren JA*, **Manisha Munasinghe***, and Andrew G. Clark. 2020. "Mitochondrial-Y Chromosome Epistasis in *Drosophila melanogaster*." *Proc. R. Soc. B.*, 287 (1937): 20200469. <https://doi.org/10.1098/rspb.2020.0469>.
 1. Ågren JA*, **Manisha Munasinghe***, and Andrew G. Clark. 2019. "Sexual Conflict through Mother's Curse and Father's Curse." *Theoretical Population Biology*, 129 (10): 9-17. <https://doi.org/10.1016/j.tpb.2018.12.007>.
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Fellowships and Awards

2020 NSF Postdoctoral Research Fellowship in Biology
2018 — 2019 Joe and Rita Calvo Teaching Award
2012 NSF Graduate Research Fellowship Program Honorable Mention

Teaching and Mentorship

Teaching Assistant Appointment

Fall 2018, **Cornell University**: BIOMG 4870 Human Genomics
Spring 2018, **Cornell University**: BTRY 4830 Quantitative Genetics and Genomics
Fall 2017, **Cornell University**: BIOMG 4870 Human Genomics
Spring 2015, **Michigan State University**: LB 119 Calculus II
Fall 2014, **Michigan State University**: LB 220 Calculus III
Spring 2014, **Michigan State University**: LB 119 Calculus II
Fall 2013, **Michigan State University**: LB 118 Calculus I
Spring 2013, **Michigan State University**: LB 119 Calculus II
Fall 2012, **Michigan State University**: LB 220 Calculus III

Guest Lecture

Fall 2018, Cornell University: Personalized Genomics and Direct-to-Consumer Testing, BIOMG 4870 Human Genomics, Cornell University - Ithaca, NY

Workshops

2021: Instructor — Intro to R, Python, and Git (Based on Software and Data Carpentry Lessons), University of Minnesota

2021: Instructor — Software Carpentry Workshop, United States Department of Agriculture Online

2020: Obtained Certification as a Carpentries Instructor to teach Software Carpentry, Library Carpentry, and Data Carpentry Workshops

Invited Presentations/Symposia

2022 Oral Presentation: Critical Role of Insertion Preference for Invasion Trajectory of Transposons. Plant and Microbial Biology Departmental Retreat, University of Minnesota — St. Paul, Minnesota

2022 Oral Presentation: Critical Role of Insertion Preference for Invasion Trajectory of Transposons. Zeaevolution Seminar — Virtual

2022 Oral Presentation: Critical Role of Insertion Preference for Invasion Trajectory of Transposons. Plant and Microbial Biology Departmental Seminar, University of Minnesota — St. Paul, Minnesota

2021 Oral Presentation: Critical Role of Insertion Preference for Invasion Trajectory of Transposons. NSF Plant Genome Research Program Award Meeting — Virtual

2020 Poster Presentation: Hybrid Incompatibility Driven By Nuclear-Mitochondrial Sexual Conflicts. Co-authors: AG Clark. Population, Evolutionary, and Quantitative Genetics Meeting 2020 (PEQG 2020) — Virtual

2019 Oral Presentation: Consequences of Sexually Asymmetric Genetic Transmission. Computational Biology Graduate Student Recruitment Research Presentation, Cornell University — Ithaca, NY USA

2019 Oral Presentation: Computational Analysis of the Consequences of Sexually Asymmetric Genetic Transmission. Computational Biology Graduate Field Seminar, Cornell University — Ithaca, NY USA

2018 Poster Presentation: Mother's Curse and Father's Curse as Manifestations of Sexual Conflict. Co-authors: JA Ågren, AG Clark. Population, Evolutionary, and Quantitative Genetics Meeting 2018 (PEQG 2018) — Madison, WI USA

2018 Poster Presentation: Mitochondrial-Y Interactions Influence Gene-Expression Profiles in *Drosophila melanogaster* males. Co-authors: JA Ågren, AG Clark. Society for Molecular Biology and Evolution 2017 (SMBE 2017) — Austin, TX USA

Service and Outreach

Diversity, Equity, and Inclusion (DEI)

2021 University of Minnesota Nature of Life (BIOL 1806) Gopher Equity Class Facilitation

2019 Cornell University NextGen Professor Program Cohort

2019 Cornell University Future Professors Institute: Advancing Diversity in the Academy

2019 Cornell University Intergroup Dialogue Project

Leadership Service

2021 — 2022 University of Minnesota Postdoctoral Association Steering Committee Policy and Advocacy Officer

- 2018 — 2020** Cornell University Graduate and Professional Student-Elected Trustee
- 2019 — 2020** Cornell University Internal Mental Health Review Committee, Grad Rep
- 2018 — 2019** Institute for Healthcare Improvement (IHI) 'Pursuing the Triple Am: A Learning and Action Collaborative' Cornell University Delegate
- 2018 — 2019** Cornell University's Coalition on Mental Health, Grad Rep
- 2018** Ivy+ Graduate and Professional Student Summit Organizing Committee, Co-Chair
- 2017 — 2018** Cornell University's Graduate and Professional Student Assembly, Executive Vice-President
- 2016 — 2017** Cornell University's Graduate and Professional Student Assembly, Vice-President for Communications
- 2016 — 2018** Cornell University's Computational Biology Graduate Student Association, President and Founder

Outreach

- 2021** University of Minnesota Nature of Life (BIOL 1806) Focus Scientist
- 2019** Cornell University Expanding Your Horizons Demo Lead: Flying Into the Gene Pool
- 2018** Cornell University Graduate Student Advocacy Day, Washington D.C., USA
- 2018** American Association for the Advancement of Science (AAAS) Catalyzing Advocacy in Science and Engineering (CASE) Workshop, Cornell University Delegate
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Professional Memberships

- 2020 —** Edward A. Bouchet Graduate Honor Society, Member
- 2018 —** Genetics Society of America (GSA), Member
- 2017 —** Society for Molecular Biology and Evolution (SMBE), Member