

Meng Yuan

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EDUCATION

University of Toronto, Toronto Canada

2019 - 2025

Ph.D. in Evolutionary Genetics

Thesis: Evolutionary Genomics of Selection Across Haploid and Diploid Plant Life Stages

Supervisors: Drs. Stephen I. Wright, John R. Stinchcombe

Sichuan University, Chengdu China

2015 - 2019

Honours B.Sc. in Biological Sciences (major), B.E. in Software Engineering (minor)

Thesis: Identification of Meiotic Drivers in *Rumex hastatulus*

Thesis supervisor: Dr. Stephen I. Wright

PUBLICATIONS

Yuan M, Sacchi BM, Choudhury BI, Barrett SCH, Stinchcombe JR, Wright SI. 2025. *Cis*-regulation of gene expression between sexes and life stages in *Rumex hastatulus*. Under review at Molecular Biology and Evolution. bioRxiv. 2025:2025.06.16.659834.

Yuan M, Kollar LM, Sacchi BM, Carey SB, Choudhury BI, Jones T, Grimwood J, Barrett SCH, McDaniel SF, Wright SI, Stinchcombe JR. 2025. Testing for the genomic footprint of conflict between life stages in an angiosperm and moss species. *Genome Biology and Evolution*. 17(8):evaf138.

Hibbins MS, Rifkin JL, Choudhury BI, Voznesenka O, Sacchi BM, **Yuan M**, Gong Y, Barrett SC, Wright SI. 2023. Phylogenomics resolves key relationships in *Rumex* and uncovers a dynamic history of independently evolving sex chromosomes. *Evolution Letters*. 9(2): 221-235.

Rifkin JL, Hnatovska S, **Yuan M**, Sacchi BM, Choudhury BI, Gong Y, Rastas P, Barrett SCH, Wright SI. 2022. Recombination landscape dimorphism and sex chromosome evolution in the dioecious plant *Rumex hastatulus*. *Philos Trans R Soc Lond B Biol Sci*. 377(1850):20210226.

Yuan M, Stinchcombe JR. 2020. Population genomics of parallel adaptation. *Mol Ecol*. 29(21): 4033-4036.

Zhang Z, Dong H, **Yuan M**, Yu Y. 2020. The complete chloroplast genome of *Oenanthe javanica*. *Mitochondrial DNA Part B*. 5(3):3151-3153.

SCHOLARSHIPS AND AWARDS

FAS Doctoral Completion Award, U of T. \$7,468

2024 – 2025

EEB Harold H. Harvey Travel Award, U of T. \$1,600

2022 – 2025

SGS Conference Travel Grant, U of T. \$910

2023

EEB Rustom H. Dastur Graduate Scholarship, U of T. \$3,200

2022, 2023

Mitacs Globalink Graduate Fellowship, Mitacs Canada. \$15,000

2019 – 2020

PRESENTATIONS AND INVITED TALKS

Talks

- Yuan M**, Kollar LM, Sacchi BM, Carey SB, Choudhury BI, Barrett SCH, McDaniel SF, Wright SI & Stinchcombe JR. 2025. *Testing for the genomic footprint of conflict between life stages in an angiosperm and a moss*. Plant and Animal Genome Conference (PAG32), San Diego, CA, US.
- Yuan M**, Sacchi BM, Choudhury BI, Barrett SCH, Stinchcombe JR & Wright SI. 2024. *Testing for genetic trade-offs in expression between sexes and life stages*. 3rd Joint Congress on Evolutionary Biology, Montreal, QC, Canada.
- Yuan M**, Kollar LM, Sacchi BM, Carey SB, Choudhury BI, Barrett SCH, McDaniel SF, Wright SI & Stinchcombe JR. 2024. *Evolutionary genomics of plant gametophytic selection*. Dept of Evolution, Ecology & Paleontology, University of Lille, online. **Invited**
- Yuan M**, Kollar LM, Sacchi BM, Carey SB, Choudhury BI, Barrett SCH, McDaniel SF, Wright SI & Stinchcombe JR. 2023. *Evolutionary genomics of plant gametophytic selection in an angiosperm and a moss species*. Evolution, Albuquerque, NM, US.
- Yuan M**, Kollar LM, Sacchi BM, Carey SB, Choudhury BI, Barrett SCH, McDaniel SF, Wright SI & Stinchcombe JR. 2023. *Evolutionary genomics of plant gametophytic selection in an angiosperm and a moss species*. European Meeting for PhD Students in Evolutionary Biology (EMPSEB28), Scotland, UK. **Best oral presentation runner-up**
- Yuan M**, Kollar LM, Sacchi BM, Carey SB, Choudhury BI, Barrett SCH, McDaniel SF, Wright SI & Stinchcombe JR. 2023. *Evolutionary genomics of plant gametophytic selection in an angiosperm and a moss species*. Atwood Colloquium, University of Toronto, Toronto, ON, Canada.
- Yuan M**, Rifkin JL, Kim D, Jarvis-Cross M, Barrett SCH, Wright SI & Stinchcombe JR. 2021. *Testing for genome-wide balancing selection due to antagonistic pleiotropy between life-stages*. Evolution, online.

Posters

- Yuan M**, Sacchi BM, Choudhury BI, Rifkin JL, Barrett SCH, Stinchcombe JR & Wright SI. 2022. *Genome-wide characterization of genetic variation for pollen expression in *Rumex hastatulus**. Congress of the European Society for Evolutionary Biology (ESEB), Prague, Czech Republic.
- Yuan M**, Rifkin JL, Kim D, Jarvis-Cross M, Barrett SCH, Wright SI & Stinchcombe JR. 2021. *Testing for genome-wide balancing selection due to antagonistic pleiotropy between life-stages*. Society for Molecular Biology and Evolution (SMBE), online.

TEACHING AND MENTORING

Teaching Assistant, University of Toronto

Intro Computation & Data Science (EEB125)

Biostatistics for Biological Science (EEB225)

Adaptation and Biodiversity (BIO120)

From Genomes to Ecosystems in a Changing World (BIO220)

Winter 2023, 2024, 2025

Fall 2021, 2022, 2023

Fall 2019, 2020, 2021

Winter 2021

Undergrad and Grad Mentoring

Undergrad Thesis Project Supervision (Bioinformatics): Mykhailo Sukmaniuk (2022-23)

Undergrad Thesis Project Supervision (Greenhouse work): Olena Voznesenska (2022-23)

EEB Grad Peer Mentorship Program: Hatena Osawa (2020-21), Xiaozhuo Tang (2021-22)

Undergrad Work-Study Program Supervision: Kieran Guimond, Katie Monat, Anya Gopaul

WORK EXPERIENCE

Simon Fraser University, Burnaby Canada

Summer 2018

Mitacs Globalink Research Intern, Supervisor: Jim Mattsson

Project: RNA Sequencing-based Analysis of Economical Traits in Western Red Cedar

COMMUNITY OUTREACH

Preprint Editorial Team, Proceedings of the Royal Society B
Bioinformatics Section

2020 - Present

Volunteer for Let's Hike T.O. non-profit organization

2023 - Present

Volunteer at Atwood Colloquium, U of T

2023

EEB Mental Health Committee Co-Chair, U of T

2022 - 2023

EEB Student Journal Club Co-Chair, U of T

2021 - 2022

Executive Committee, Chinese Genomics Online Meet-up

2020

Peer Review of Academic Journals

- Co-reviewed a manuscript for Evolution Letters in 2021 with Dr. John Stinchcombe

Founder and President, Botany Association at Sichuan University

2016 - 2018