

Meng Yuan

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EDUCATION

University of Toronto, Toronto Canada 2019 – 2025
Ph.D. in Computational Biology
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, B.E. in Software Engineering (minor)
Thesis: Identification of Selfish Genetic Elements 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, Pyne C, Sukmaniuk M, Glasgow E, **Yuan M**, Gong Y, Barrett SCH, Wright SI. 2025. Rapid evolution of synteny associated with multiple origins of dioecy and XY sex determination. *bioRxiv*. 2025:2025.12.21.695719.
- Sacchi BM, **Yuan M**, Pyne C, Choudhury B, Gong Y, Barrett SC, Wright SI. Widespread loss of Y expression in the absence of transcriptional dosage compensation in *Rumex hastatulus*. *bioRxiv*. 2025:2025.11.20.689509.
- 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
Outstanding Undergraduate International Exchange Scholarship, China Scholarship Council. \$6,500	2018

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 in Python (EEB125)

Winter 2023, 2024, 2025

Biostatistics for Biological Science in R (EEB225)

Fall 2021, 2022, 2023

Adaptation and Biodiversity (BIO120)

Fall 2019, 2020, 2021

From Genomes to Ecosystems in a Changing World (BIO220)

Winter 2021

Undergrad and Grad Mentoring

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

Undergrad Thesis Project Supervision (Greenhouse): 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 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

Founder and President, Botany Association of Sichuan University

2016 - 2018