

Emiliano Martí

Department of Biology
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Rochester, NY 14627

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EDUCATION

- 2021–Present **PhD candidate E2G2 program**
University of Rochester, Rochester, NY
Advisors: Dr. Daven Presgraves & Dr. Amanda Larracuente
- 2021–2023 **MS in Biology**
University of Rochester, Rochester, NY
Advisors: Dr. Daven Presgraves & Dr. Amanda Larracuente
- 2019–2021 **MS in Molecular and Cell Biology**
Universidade Estadual Paulista (UNESP), Rio Claro, São Paulo, Brazil
Advisor: Dr. Diogo Cavalcanti Cabral-De-Mello
Thesis: Evolution of multigene families in species with large genomes using Schistocerca grasshoppers as models
- 2013–2018 **BS in Genetics**
Universidad Nacional de Misiones (UNAM), Posadas, Misiones, Argentina
Advisors: Dr. Elio Rodrigo Daniel Castillo & Dr. Alberto Taffarel
Thesis: Phylogeographic and genetic patterns of the polymorphic Robertsonian translocation of Scotussa cliens (Stal, 1861) (ACRIDIDAE: MELANOPLINAE)

RESEARCH AND PROFESSIONAL EXPERIENCE

- 2019–2021 **Research Scientist**
Sao Paulo Research Foundation (FAPESP) – Project 2015/16661-1
Project title: *Sex and B chromosome enigmas: model systems for the study of chromosome and genome evolution*
- 2019–2021 **Research Scientist**
Department of Biology – Program in Molecular and Cell Biology
Universidade Estadual Paulista (UNESP)
Rio Claro, SP, Brazil
Project title: *Molecular composition of the B chromosome of Aetalion reticulatum*
- 2017–2019 **Research Scientist**
Laboratório de Genética Evolutiva
Facultad de Ciencias Exactas, Químicas y Naturales
Universidad Nacional de Misiones (UNaM), Posadas, Misiones, Argentina
Project title: *Chromosomal evolution of three subtropical animal models*
- 2016–2018 **Field Assistant**
Laboratório de Genética Evolutiva

Facultad de Ciencias Exactas, Químicas y Naturales
Universidad Nacional de Misiones (UNaM), Posadas, Misiones, Argentina

TEACHING

- Fall 2022 **Teaching Assistant (Instructor: Dr. Amanda Larracuenta)**
Applied Genomics
University of Rochester, Rochester, NY
- Spring 2022 **Teaching Assistant (Instructor: Dr. Justin Fay)**
Computational Biology
University of Rochester, Rochester, NY
- 2018–2019 **Teaching Assistant (Instructor: Dr. Ana Honfi)**
Evolutionary Genetics
Facultad de Ciencias Exactas, Químicas y Naturales
Universidad Nacional de Misiones (UNaM), Posadas, Misiones, Argentina
- 2017–2018 **Teaching Assistant (Instructor: Dr. Maria Victoria García)**
Quantitative and Population Genetics
Facultad de Ciencias Exactas, Químicas y Naturales
Universidad Nacional de Misiones (UNaM), Posadas, Misiones, Argentina
- 2014–2015 **Teaching Assistant (Instructor: Eusebia Concepción Valdez)**
Biochemistry
Facultad de Ciencias Exactas, Químicas y Naturales
Universidad Nacional de Misiones (UNaM), Posadas, Misiones, Argentina

INTERNSHIPS, SCHOLARSHIPS AND AWARDS

- 2025 Awarded the Genetics Society of America's **DeLill Nasser Award** for Professional Development in Genetics
- 2024–present Awarded **Ernst Caspari Fellowship** in Evolutionary, Developmental and Molecular Genetics.
University of Rochester, Rochester, NY
- 2023 Awarded **best graduate student talk prize** in Genetics Day. University of Rochester, Rochester, NY
- 2019–2021 **MSc fellowship**
Coordination for the Improvement of Higher Education Personnel (CAPES)
Brasília, DF, Brazil.
- 2018–2019 **EVC-CIN National Scholarship**
Consejo Interuniversitario Nacional – Ciudad Autónoma de Buenos Aires, Argentina
Awarded to qualified undergraduate students who are included in research projects
- 2017–2018 **EVC-CIN National Scholarship**
Consejo Interuniversitario Nacional – Ciudad Autónoma de Buenos Aires, Argentina
Awarded to qualified undergraduate students who are included in research projects
- 2017 Awarded **best student talk**. XLVI Congreso Argentino de Genética.
Universidad Nacional de San Luis, San Luis, Argentina

PUBLICATIONS

Presgraves DC[#], Dawe RK, Dyer KA, Fishman L, Bhide SA, Bradshaw SL, Brady MJ, Burga A, Courret C, Fagen B, Ferretti ABSM, Kelemen RK, Kitano J, Liu Y, **Martí E**, Erlenbach T, Reinhardt JA, Ross L, Runge JN, Swanepoel CM, Vicoso B, Vogan AA, Lindholm AK[#], Larracuente AM[#], Unckless RL[#]. 2026. The Evolutionary Genomics of Meiotic Drive. doi: [10.1093/molbev/msag020](https://doi.org/10.1093/molbev/msag020)

Albuquerque L, Milani D, **Martí E**, Ferretti ABSM, Rico-Porras JM, Mora P, Lorite P, Ziabari OS, Brisson JA, Palacios-Gimenez OM, Cabral-de-Mello DC.[#] 2025. Exploring the Satellitome of the Pest Aphid *Acyrtosiphon pisum* (Hemiptera, Aphididae): Insights Into Genome Organization and Intraspecies Evolution. *Genome Biology and Evolution*. doi: [10.1093/gbe/evaf104](https://doi.org/10.1093/gbe/evaf104)

Muirhead CA., **Martí E.**, Shogren EH., Uy JAC.[#], Presgraves DC.[#] Genomic origins and evolution of neo-sex chromosomes in Pacific-island birds. 2025. *Proceedings of the National Academy of Sciences*.

Martí E.[#], Larracuente AM[#]. 2025. An innovation in host responses to escalating genomic conflicts. *Trends in Genetics*. doi: [10.1016/j.tig.2025.03.001](https://doi.org/10.1016/j.tig.2025.03.001)

Shogren EH., Sardell JM., Muirhead CA., **Martí E.**, Cooper EA., Moyle RG, Presgraves DC.[#], Uy JAC.[#] 2024. Recent secondary contact, genome-wide admixture, and asymmetric introgression of neo-sex chromosomes between two Pacific island bird species. *PLoS Genetics*. doi: [10.1371/journal.pgen.1011360](https://doi.org/10.1371/journal.pgen.1011360)

Martí E.[#], Larracuente AM. 2023. Genetic conflict and the origin of multigene families: implications for sex chromosome evolution. *Proceedings B*. doi: [10.1098/rspb.2023.1823](https://doi.org/10.1098/rspb.2023.1823)

Gasparotto AE., Milani D., **Martí E.**, Ferretti ABSM., Bardella VB., Hickmann F., Zrzavá M., Marec F., Cabral-de-Mello DC.[#] 2022. A step forward in the genome characterization of the sugarcane borer, *Diatraea saccharalis*: karyotype analysis, sex chromosome system and repetitive DNAs through a cytogenomic approach. *Chromosoma*. doi: [10.1007/s00412-022-00781-4](https://doi.org/10.1007/s00412-022-00781-4)

Crepaldi C., **Martí E.**, Gonçalves EM., Martí DA., Parise-Maltempi P.[#] 2021. Genomic differences between the sexes in a fish species seen through satellite DNAs. *Frontiers in Genetics*. doi: [10.3389/fgene.2021.728670](https://doi.org/10.3389/fgene.2021.728670)

Martí E., Milani D., Bardella V., Albuquerque L., Song H., Palacios-Gimenez OM.[#], Cabral-de-Mello DC.[#] 2021. Cytogenomic analysis unveils mixed molecular evolution and recurrent chromosome rearrangements shaping the multigene families on *Schistocerca* grasshopper genomes. *Evolution*, 75: 2027-2041. doi: [10.1111/evo.14287](https://doi.org/10.1111/evo.14287)

Santander M., Cabral-De-Mello DC., Taffarel A., **Martí E.**, Martí DA., Palacios-Gimenez OM., Castillo ER.[#] 2021. New insights into the six decades of Mesa's hypothesis of chromosomal evolution in Ommexechinae grasshoppers (Orthoptera, Acridoidea). *Zoological Journal of the Linnean Society*, 193:1141-1155 doi: [10.1093/zoolinnean/zlaa188](https://doi.org/10.1093/zoolinnean/zlaa188)

[#]Denotes corresponding author

MEMBERSHIP AND SERVICE

Fall 2025 **ISO International Mentor**. Support first-year international students in their transition to college in a new country.

Spring 2024–Present **University of Rochester Department of Biology's Graduate Mentor Program**. Support first-year college students from underrepresented educational backgrounds to succeed in college.

2023–2025 **GSA Peer Review Training program**. Reviewer for the journals *Genetics* and *G3* in the *Empirical &*

Theoretical Population and Evolutionary Genetics section.

MENTORSHIP

2022–Present Undergraduate students
University of Rochester, Rochester, NY

Eric Wang (*Drosophila* genetics, DNA extractions, PCR, plasmid cloning)

Tristan Gamard (*Drosophila* genetics, DNA extractions, PCR, genetic screens)

Tyler Handler (*Drosophila* genetics, CRISPR design, cloning, recombination mapping, genomics)

[Tyler received a Department of Biology's de Kiewiet and a University of Rochester Schwartz

Discover Grant Summer Research Fellowship in 2025]

PRESENTATIONS

2025 “**Conflictos genómicos e incompatibilidad híbrida en *Drosophila***” LIII Congreso Argentino de Genética. Posadas, Argentina. *Invited speaker.*

2025 “**The ribosomal locus mediates a single-locus hybrid incompatibility in *Drosophila*.**” Evolution 2025. Athens, GA, USA. *Oral presentation*

2025 “**The ribosomal locus mediates a single-locus hybrid incompatibility in *Drosophila*.**” 66th Annual *Drosophila* Research Conference. San Diego, CA, USA. *Oral presentation*

2023 “**Evolución de un factor de inviabilidad híbrida en especies de *Drosophila* del clado *simulans*.**” *Invited seminar* at Laboratorio de Genética Evolutiva. IBS Conicet–UNaM. Posadas, Misiones, Argentina. *Oral Presentation*

2023 “**The role of ampliconic gene families in intragenomic conflict and sex chromosome evolution.**” SMBE satellite workshop on the Evolutionary and Genomics Consequences of Drive. Arolla, Switzerland. *Oral Presentation*

2023 “**Derepression of R1 and R2 non-LTR retrotransposons causes hybrid incompatibility in *Drosophila*.**” 34th Annual Genetics Day. University of Rochester. Rochester, NY, USA. *Oral Presentation*

2023 “**Evolutionary history of CK2βtes— a sex-linked ampliconic gene family in the simulans clade.**” 64th Annual *Drosophila* Research Conference. Chicago, IL, USA. *Poster presentation*

2019 “**Behavior of a holocentric B chromosome during meiosis and spermatogenesis.**” 4th B chromosome Conference. Botucatu, Brazil. *Oral presentation*

2018 “**Genetic variability and evolution in natural populations of *Scotussa cliens* (Stal, 1861) (Acrididae: Melanoplinae).**” XXII International Congress of Genetics. Foz do Iguaçu, Brazil. *Poster presentation*

2017 “**Polimorfismo de fusiones céntricas en poblaciones naturales de *Scotussa cliens* (Stal, 1861) (Acrididae: Melanoplinae).**” XLVI Congreso Argentino de Genética. San Luis, Argentina. *Oral presentation*

RESEARCH INTERESTS

- Selfish genetic elements
- Intragenomic conflict
- Sex chromosome evolution