

Emiliano Martí

Department of Biology
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Rochester, NY 14627

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EDUCATION

- 2021–Present **PhD Student 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: Neni Valdéz)**
Biochemistry
Facultad de Ciencias Exactas, Químicas y Naturales
Universidad Nacional de Misiones (UNaM), Posadas, Misiones, Argentina

INTERNSHIPS, SCHOLARSHIPS AND AWARDS

- 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

Martí E.[#], Larracuenta 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.[#], Larracuent 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

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–Present **GSA Peer Review Training program.** Currently reviewer for the journals *Genetics* and *G3* in the *Empirical & Theoretical Population and Evolutionary Genetics* section.

2023–Present Invited reviewer to **BMC Genomics**.

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 “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.
- 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