Pedro Henrique Pezzi

https://pedrohpezzi.github.io/
ORCID: 0000-0003-4324-5078
August 2026

Postdoctoral Fellow
ppezzi@uark.edu
Phone Number: +1 479 332-9369

University of Arkansas
Department of Biological Sciences
Fayetteville, AR, USA

EDUCATION

2019 – 2023 **Ph.D. in Genetics and Molecular Biology**
Federal University of Rio Grande do Sul
Visiting student at the University of Colorado at Boulder (CAPES-PrInt scholarship). Stacey Smith's lab.
Project Title: Hybridization and speciation in *Petunia* and related groups: a phylogenomic approach.
Advisor: Dr. Loreta Brandão de Freitas

2018 – 2019 **Bachelor of Science, Biology**
Federal University of Rio Grande do Sul
Advisor: Dr. Paula Beatriz de Araujo

2013 – 2018 **Bachelor of Education, Biology**
Federal University of Rio Grande do Sul
Visiting student at the California State University, Fullerton (Science without Borders/CAPES scholarship)
Advisor: Dr. Heloisa Junqueira

PROFESSIONAL EXPERIENCE

2024 – present Postdoctoral Fellow - University of Arkansas (Latvis Lab)

PUBLICATIONS

Google Scholar: Citations: 162; h-index 6. [link] **Web of Science**: Citations: 121; h-index 6. [link]

Published

Pezzi, P. H. & Latvis, M. (2026). Chromosome-level reference genome of the beach false foxglove, *Agalinis fasciculata* (Orobanchaceae). *Genome Biology and Evolution*, 18, evag116. https://doi.org/10.1093/gbe/evag116

Pezzi, P. H., Soltis, P. S., Soltis, D. E., & Latvis, M. (2026). 'Dispersification' of *Agalinis* (Orobanchaceae) Into South America Is Associated With Hummingbird Pollination and Perennial Life-History Shifts. *Journal of Biogeography*, 53, e70143. https://doi.org/10.1111/jbi.70143

Pezzi, P. H.*, Schnitzler, C. K.*, Giudicelli, G. C., Turchetto, C., Bombarely, A., Bonatto, S., & Freitas, L. B. (2026). Population structure and genetic diversity uncover hidden speciation in an atypical *Petunia* (Solanaceae) population. *Botanical Journal of the Linnean Society*, 210, 255–266. https://doi.org/10.1093/botlinnean/boaf060 **These authors contributed equally to this work.*

Pezzi, P. H., Gonçalves, L. T., Backes, A., Giudicelli, G. C., Turchetto, C., Bombarely, A., & Freitas, L. B. (2026). Genomic insights into the rapid diversification of *Petunia* in a biodiversity hotspot in the South American grasslands. *Annals of Botany*, 137, mcaf329. https://doi.org/10.1093/aob/mcaf329

Backes, A.*, Gonçalves, L. T.*, **Pezzi, P. H.**, & Freitas, L. B. (2025). Phylogenomics reveals taxonomic challenges in *Calibrachoa* (Solanaceae) and sheds light on the origins of cultivated million bells. *Molecular Phylogenetics and Evolution,* 211, 108405. https://doi.org/10.1016/j.ympev.2025.108405 **These authors contributed equally to this work.*

Gonçalves, L. T., **Pezzi, P. H.**, Deprá, M., & Françoso, E. (2025). Mitonuclear coevolution in bumblebees (*Bombus*): genomic signatures and its role in climatic niche adaptation. *Genome Biology and Evolution*, 17, evaf123. https://doi.org/10.1093/gbe/evaf123

Soares, B. E., Moura, A. L., Araújo, V. N. D., Azevedo, N. H., Cardoso, A. C. A., Cardoso, M. R., … & Vidor, C. B., including **Pezzi, P. H.** (2025). The "Conhecimento Brasil" Program neglects the structural problems of Brazilian science and fails to offer a solution to the brain drain. *Anais da Academia Brasileira de Ciências*, 97, e20240496. doi: https://doi.org/10.1590/0001-3765202520240496

Gonçalves, L. T., **Pezzi, P. H.**, Montagner F. R. G., Souza W. V., Françoso E., & Deprá M. (2025). The nuclear and mitochondrial genomes of the bellicose bumblebee (*Bombus bellicosus*, Hymenoptera: Apidae), a threatened pollinator in a changing South American landscape. *Genome*, 68, 1-10. https://doi.org/10.1139/gen-2024-0166

Giudicelli, G. C.*, **Pezzi, P. H.***, Guzmán-Rodriguez, S., Turchetto, C., Bombarely, A., & Freitas, L. B. (2024). Historical and Ongoing Hybridisation in Southern South American Grassland Species. *Scientific Reports*, 14, 27989. https://doi.org/10.1038/s41598-024-79584-9 **These authors contributed equally to this work.*

Pezzi, P. H., Wheeler, L. C., Freitas, L. B., & Smith, S. D. (2024). Incomplete lineage sorting and hybridization underlie tree discordance in *Petunia* and related genera (Petunieae, Solanaceae). *Molecular Phylogenetics and Evolution,* 198, 108136. https://doi.org/10.1016/j.ympev.2024.108136

Souza, A. C., Soares, L. S., Backes, A., Simon, L., **Pezzi, P. H.**, Turchetto, C., & Freitas, L. B. (2024). Unraveling the genetic diversity and taxonomic ambiguities of endemic *Petunia* species from subtropical highland grasslands. *Botanical Journal of the Linnean Society*, 204, boae016. https://doi.org/10.1093/botlinnean/boae016

Backes, A., **Pezzi, P. H.**, Gonçalves, L. T., Greppi, J. A. & Freitas, L. B. (2023).. Integrating morphology, niche modelling, and molecular data to disentangle taxonomic challenges in a species complex of *Calibrachoa* (Solanaceae). *Plant Ecology and Diversity,* 16, 165-77. https://doi.org/10.1080/17550874.2023.2274842

Pezzi, P. H.*, Gonçalves, L. T.*, Deprá, M., & Freitas, L. B. (2023). Evolution and diversification of the O-methyltransferase (OMT) gene family in Solanaceae. *Genetics and Molecular Biology*, 46, e20230121. https://doi.org/10.1590/1678-4685-GMB-2023-0121 **These authors contributed equally to this work.*

Pezzi, P. H., Guzmán-Rodriguez, S., Giudicelli, G. C., Turchetto, C., Bombarely, A., & Freitas, L. B. (2022). A convoluted tale of hybridization between two *Petunia* species from a transitional zone in South America. *Perspectives in Plant Ecology, Evolution and Systematics*, 56, 125688. https://doi.org/10.1016/j.ppees.2022.125688

Gonçalves, L. T., **Pezzi, P. H.**, & Bianchi F. M. (2022). Four new stink bug mitogenomes corroborate the internal inconsistencies in the classification of Pentatomidae (Hemiptera). *Zootaxa,* 5120, 128-142. ttps://doi.org/10.11646/zootaxa.5120.1.8

Wheeler, L. C., Walker, J. F., Ng, J., Deanna, R., Dunbar-Wallis, A., Backes, A., **Pezzi, P. H**., Palchetti, M. V., Robertson, H. M., Monaghan, A., Freitas, L. B., Barboza, G. E., Moyroud. E., & Smith, S. D. (2022). Transcription factors evolve faster than their structural gene targets in the flavonoid pigment pathway. *Molecular biology and evolution,* 39, msac044. https://doi.org/10.1093/molbev/msac044

Zimmermann, B. L., Cardoso, G. M., Bouchon, D., **Pezzi, P. H.**, Palaoro, A. V., & Araujo, P. B. (2021). Supergroup F *Wolbachia* in terrestrial isopods: Horizontal transmission from termites?. *Evolutionary ecology*, 35, 165-182. https://doi.org/10.1007/s10682-021-10101-4

Pezzi, P. H., Araujo, P. B., & Wood, C. T. (2019). Coprophagy in detritivores: methodological design for feeding studies in terrestrial isopods (Crustacea, Isopoda, Oniscidea). *Nauplius*, 27, e2019010. https://doi.org/10.1590/2358-2936e2019010

GRANTS AND AWARDS

2024 BSA Professional Member Travel Grants – $500
2023 Godfrey Hewitt Mobility Award, European Society for Evolutionary Biology – €1,822
2022 CAPES, Brazilian Ministry of Education. Visiting PhD student at CU Boulder – $10,900
2022 Emergency Degree Continuation Award, Society for the Study of Evolution – $500
2022 Productivity award from the PPGBM/UFRGS graduate program – R$1,200
2022 ESEB Conference Travel Award, European Society for Evolutionary Biology – €1,340
2019 CNPq, Brazilian Ministry of Science, Technology and Innovation. Doctoral Scholarship.
2015 CAPES, Brazilian Ministry of Education. Visiting student at CSUF – $13,628

RECENT EVENTS AND PRESENTATIONS

2026 Botany – Tucson, AZ, USA
Genomic Signatures of Stomatal Evolution in Orobanchaceae

2026 SSB Breakout Meeting – Baton Rouge, LA, USA

2025 Botany – Palm Springs, CA, USA
Biogeographic history of *Agalinis* (Orobanchaceae): interpreting disjunctions and identifying radiations

2025 Arkansas Native Plants Society Spring Meeting – Monticello, AR, USA

2024 Evolution – Montreal, QC, Canada
The implications of hybridization and rapid diversification in the species delimitation of *Petunia* [link]

2024 Botany – Grand Rapids, MI, USA
Rapid speciation and hybridization contribute to high levels of tree discordance in *Petunia* and related genera

2023 BIO-Wallace – Porto Alegre, RS, Brazil
Petunia: um modelo para especiação rápida com fluxo gênico

2023 Evolution – Albuquerque, NM, USA
How do novel species arise in a highly endemic biodiversity hotspot? Insights from *Petunia*. [link]

2022 SolSeminars – virtual
The role of hybridization in the diversification of *Petunia* species. [link]

2022 ESEB 2022 – Prague, Czech Republic
Petunia species in the making: consequences of hybridization between two *P. axillaris* subspecies

2021 Botany – virtual

A convoluted tale of hybridization between two *Petunia* species

TEACHING EXPERIENCE

2024 Guest Lecturer, University of Arkansas
Class: Plant Biology - C4 photosynthesis and cellular respiration
USA- Fayetteville, AR

2021 Teaching Assistant, Federal University of Rio Grande do Sul
Class: Introduction to Phylogeography
Brazil - Porto Alegre, RS

2020 Teaching Assistant, Federal University of Rio Grande do Sul
Class: Biodiversity
Brazil - Porto Alegre, RS

2019 Guest Lecturer, CESUCA University Center
Lecture: Fundamentals of Genetics
Brazil - Cachoeirinha, RS

2018 Teaching Assistant, Federal University of Rio Grande do Sul
Class: Invertebrate Zoology II
Brazil - Porto Alegre, RS

2018 Teaching Assistant, Federal University of Rio Grande do Sul
Class: Biochemistry II
Brazil - Porto Alegre, RS

2017 Teaching Assistant, Federal University of Rio Grande do Sul
Class: Genetics I
Brazil - Porto Alegre, RS

FIELDWORK EXPERIENCE

2026 Field Organizer, *Agalinis* and *Esterhazya* (Orobanchaceae) survey in southeastern and northeastern Brazil (BA, RJ, MG). With Dr. Maribeth Latvis

2025 Field Organizer, *Agalinis* and *Esterhazya* (Orobanchaceae) survey in southeastern Brazil (MG, RJ, ES). With Dr. Maribeth Latvis, Dr. Leonardo Tresoldi Gonçalves, and Dr. Alice Backes

2019 Field Assistant, tribe Petunieae (Solanaceae) survey, Southern Brazil (RS, SC). With Dr. Luke Wheeler and Dr. Alice Backes

REVIEWER ACTIVITIES

AoB Plants (1)
Plant Biosystems (1)
Taxon (1)
Journal of Evolutionary Biology (3)
Journal of Biogeography (1)
Molecular Ecology Resources (1)
Ecology and Evolution (3)
Global Ecology and Conservation (1)
Wellcome Open Research (1)

Frontiers in Plant Sciences (1)	The Plant Journal (1)	iScience (1)
Plant Diversity (1)	American Journal of Botany (1)	Molecular Phylogenetics and Evolution (1)

EVALUATING COMMITTEE ACTIVITIES

2025 Committee Member, Qualification Exam of Sebastián Guzmán-Rodriguez. The center-periphery hypothesis accounts for most genetic diversity in a widely distributed herbaceous species. Federal University of Rio Grande do Sul.

2025 Committee Member, Honors Thesis of Paulo João de Medeiros Furtado. Evolução molecular dos genes BSMT em espécies de *Petunia*: contribuição para a diferenciação das síndromes florais. Federal University of Rio Grande do Sul.

OUTREACH ACTIVITIES

2026 PLANTS program, Botanical Society of America
PLANTS established mentor at BOTANY 2026
USA - Tucson, AZ

2026 STEAM Night, Holcomb Elementary School
Plant press activity for students and families during STEAM Night
With MSc. Jenna Miladin and Remington Motte
USA - Fayetteville, AR

2026 School Outreach Project, John L. Colbert Middle School
Demonstration of real-world biological and ecological research with plants for 6th-grade students
With Dr. Diego Paredes-Burneo and MSc. Jenna Miladin.
USA - Fayetteville, AR

2025 PLANTS program, Botanical Society of America
PLANTS established mentor at BOTANY 2025
USA - Palm Springs, CA

2024 PLANTS program, Botanical Society of America
PLANTS established mentor at BOTANY 2024
USA - Grand Rapids, MI

2020 School Outreach Project, Pan American School of Porto Alegre
Evaluator of scientific projects at the 10th Science Fair
Brazil - Porto Alegre, RS

LANGUAGE SKILLS

Portuguese: mother tongue **Spanish**: B2 **English**: C2