

Pedro Henrique Pezzi

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Postdoctoral Fellow
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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: Hibridação e especiação em *Petunia* e grupos relacionados: uma abordagem filogenômica.

Advisor: Loreta Brandão de Freitas

2018 – 2019 Bachelor of Science, Biology

Federal University of Rio Grande do Sul

Advisor: 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: Heloisa Junqueira

PROFESSIONAL EXPERIENCE

2024 Postdoctoral Fellow - University of Arkansas (Latvis Lab)

PUBLICATIONS

Google Scholar: Citations: 101; h-index 5. [[link](#)] **Web of Science:** Citations: 81; h-index 5. [[link](#)]

Published

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>

Pezzi, P. H.*, Schnitzler, C. K.*, Giudicelli, G. C., Turchetto, C., Bombarely, A., Bonatto, S., & Freitas, L. B. (2025). Population structure and genetic diversity uncover hidden speciation in an atypical *Petunia* (Solanaceae) population. *Botanical Journal of the Linnean Society*, 208, boaf060. <https://doi.org/10.1093/botlinnean/boaf060> *These authors contributed equally to this work.

- 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. <https://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>

Submitted

- Pezzi, P. H.**, Gonçalves, L. T., Backes, A., Giudicelli, G. C., Turchetto, C., Bombarely, A., & Freitas, L. B. *submitted*. Evaluating the evolutionary origin of atypical *Petunia* populations in a hybridization hotspot.

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

2025	Botany – Palm Springs, CA, USA Biogeographic history of <i>Agalinis</i> (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 <i>Petunia</i> [link]
2024	Botany – Grand Rapids, MI, USA Rapid speciation and hybridization contribute to high levels of tree discordance in <i>Petunia</i> and related genera
2023	BIO-Wallace – Porto Alegre, RS, Brazil <i>Petunia</i> : 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 <i>Petunia</i> . [link]
2022	SolSeminars – virtual The role of hybridization in the diversification of <i>Petunia</i> species. [link]
2022	ESEB 2022 – Prague, Czech Republic <i>Petunia</i> species in the making: consequences of hybridization between two <i>P. axillaris</i> subspecies
2021	Botany – virtual A convoluted tale of hybridization between two <i>Petunia</i> 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

- 2025** Field Organizer, *Agalinis* and *Esterhazyia* (Orobanchaceae) survey, 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)	Journal of Evolutionary Biology (1)	Ecology and Evolution (2)
Plant Biosystems (1)	Journal of Biogeography (1)	Global Ecology and Conservation (1)
Taxon (1)	Molecular Ecology Resources (1)	Wellcome Open Research (1)

EVALUATING COMMITTEE ACTIVITIES

- 2025** Committee Member, Qualification Exam of Sebastián Guzmán-Rodríguez. 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

- 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