Matheus Gallas Lopes, Pharmacist, PhD

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Curriculum Vitae — last updated: July 2026

RESEARCH INTERESTS

- **Translational validity of preclinical findings**, including optimization of the preclinical-to-clinical research pipeline and investigation of factors associated with successful translation;
- **Translational validity of experimental models of psychiatric disorders**, particularly zebrafish and rodent models;
- **Systematic reviews and meta-analyses of preclinical findings;**
- **Reproducibility and replicability across preclinical research**, with emphasis on methodological robustness and reliability of findings;
- **Meta-research at the preclinical–clinical interface,** examining how study design, reporting practices, and analytical choices influence translational outcomes;
- **Reporting practices and sources of bias in animal studies;**

RESEARCH SKILLS

Meta-research at the preclinical–clinical interface; coordination of systematic reviews and advanced meta-analytic methods, preregistrations, and replication studies; training and mentoring in preclinical evidence synthesis and research integrity; undergraduate and graduate teaching in pharmacology and neuropsychopharmacology; statistical analysis and reproducible workflows (R, Python); preclinical behavioral models (zebrafish, rodents, fruit flies); open science practices (preregistration, data sharing).

EDUCATION

PhD in Biological Sciences: Pharmacology and Therapeutics
Universidade Federal do Rio Grande do Sul (UFRGS), Brazil
Dec 2022 – Jul 2026
Thesis: Effects of NMDA antagonists on social behavior: relevance for modeling negative symptoms of schizophrenia in laboratory animals
Advisor: Prof. Ana Paula Herrmann

Bachelor of Pharmacy (BPharm)
Universidade Federal do Rio Grande do Sul (UFRGS), Brazil
Aug 2018 – Oct 2022
Undergraduate thesis: Ten years of unpredictable chronic stress research in zebrafish: a systematic review and meta-analysis
Advisor: Prof. Ana Paula Herrmann

POSITIONS AND SCIENTIFIC APPOINTMENTS

2025 – Present	**Coordinating Team Member**, Brazilian Reproducibility Initiative in preclinical Systematic review and meta-Analysis (BRISA), Brazil
2025 – Present	**Member,** Brazilian Reproducibility Network (BRN), Brazil
2023 – 2024	**Visiting Researcher**, RCSI School of Medicine and Health Sciences, Ireland
2018 – 2022	**Member,** Brazilian Reproducibility Initiative (BRI)
2021 – 2022	**Internship in Clinical Pharmacy**, Hospital de Clínicas de Porto Alegre, Brazil
2019 – 2019	**Internship**, ChronoEpilepsyLab, RCSI School of Medicine and Health Sciences, Ireland
2018 – 2022	**Undergraduate Researcher**, Laboratory of Neurobiology and Experimental Psychopharmacology, Brazil
2018 – 2022	**Undergraduate Researcher**, Laboratory of Psychopharmacology and Behavior, Brazil
2016 – 2018	**Undergraduate Researcher**, Laboratory of Experimental Psychology, Brazil
2016 – 2018	**Undergraduate Researcher**, Laboratory of Ichthyology, Brazil

TEACHING & MENTORSHIP

2023 – 2026	**Invited lecturer:** Evidence Synthesis, Neuroendocrinology and Research Integrity, RCSI/UFRGS
2023 – 2026	**Co-supervisor of undergraduate thesis**, UFRGS
2023 – 2026	**Graduate teaching assistant:** Pharmacology and Animal Models for Biomedical Research, UFRGS
2022 – Present	**Training** activities in preclinical systematic reviews and meta-analyses, BRISA
2021 – 2021	**Undergraduate teaching assistant:** Psychopharmacology, UFRGS

HONORS AND AWARDS

2025	**Einstein Foundation Award for Promoting Quality in Research** — Institutional Award Awarded for meta-research conducted by the Brazilian Reproducibility Initiative, including the preprint “Estimating the replicability of Brazilian biomedical science”.
2025	**Scientific Exchange Grant** — Swiss National Science Foundation Participation in the Open Science Retreat.
2025	**Travel Funding** — Berlin Institute of Health at Charité Meta-Science Summer School.
2024	**Early Career Award** — Schizophrenia International Research Society (SIRS)
2024	**Travel Award** — International Brain Research Organization (IBRO)
2023	**Neurobiology Commission Research Skills Bursary** — International League Against Epilepsy (ILAE)
2023	**Outstanding Teaching Award** — Universidade Federal do Rio Grande do Sul (UFRGS) For outreach and science education activities promoting engagement between public universities and secondary education schools.
2022	**Alfredo Leal Prize**, First in Class, Pharmacy (UFRGS)
2022	**Honors Degree**, Issued by the Faculty of Pharmacy
2022	**Honors Degree**, Issued by the Regional Council of Pharmacy (CRF/RS)
	Multiple Honorary Mentions for Conference Presentations (6)

SCHOLARLY PUBLICATIONS

Peer-reviewed journal articles

1. Hillman C, Fontana BD, … **Gallas-Lopes M**, et al. Housing and husbandry factors affecting zebrafish novel tank test responses: a global multi-laboratory study. *Lab Animal*. 2025.

2. Zanona QK, **Gallas-Lopes M**, et al. Neurological effects induced by micro- and nanoplastics in fish: a systematic review and meta-analysis. *Journal of Hazardous Materials*. 2025.
3. Oliveira GR, **Gallas-Lopes M**, et al. Behavioral and neurochemical effects of carbofuran in zebrafish. *Comparative Biochemistry and Physiology C*. 2024.
4. Giongo FK, **Gallas-Lopes M**, Benvenutti R, et al. Effects of taurine in mice and zebrafish behavioral assays with translational relevance to schizophrenia. *International Journal of Neuropsychopharmacology*. 2023.
5. **Gallas-Lopes M**, Bastos LM, Benvenutti R, et al. Systematic review and meta-analysis of 10 years of unpredictable chronic stress in zebrafish. *Lab Animal*. 2023.
6. **Gallas-Lopes M**, Benvenutti R, Donzelli NIZ, et al. A systematic review of the impact of environmental enrichment in zebrafish. *Lab Animal*. 2023.
7. Chitolina R, **Gallas-Lopes M**, et al. Chemically-induced epileptic seizures in zebrafish: a systematic review. *Epilepsy Research*. 2023.
8. Reis CG, Bastos LM, Chitolina R, **Gallas-Lopes M**, et al. Neurobehavioral effects of fungicides in zebrafish: a systematic review and meta-analysis. *Scientific Reports*. 2023.
9. Sachett A, **Gallas-Lopes M**, Benvenutti R, et al. Curcumin micronization by supercritical fluid: in vitro and in vivo biological relevance. *Industrial Crops and Products*. 2022.
10. Sachett A, Benvenutti R, Reis CG, **Gallas-Lopes M**, et al. Micronized curcumin causes hyperlocomotion in zebrafish larvae. *Neurochemical Research*. 2022.
11. Sachett A, **Gallas-Lopes M**, Benvenutti R, et al. Non-micronized and micronized curcumin do not prevent the behavioral and neurochemical effects induced by acute stress in zebrafish. *Pharmacological Reports*. 2022.
12. Marcon M, Benvenutti R, **Gallas-Lopes M**, et al. What do male and female zebrafish prefer? Directional and colour preference in maze tasks. *European Journal of Neuroscience*. 2022.
13. Piato A, Benvenutti R, **Gallas-Lopes M**, et al. Glutamate NMDA receptor antagonists with relevance to schizophrenia: a review of zebrafish behavioral studies. *Current Neuropharmacology*. 2022.
14. Benvenutti R, **Gallas-Lopes M**, et al. How do zebrafish respond to MK-801 and amphetamine? *Journal of Neuroscience Research*. 2021.
15. Benvenutti R, Marcon M, **Gallas-Lopes M**, et al. Swimming in the maze: an overview of maze apparatuses and protocols to assess zebrafish behavior. *Neuroscience & Biobehavioral Reviews*. 2021.
16. Vasconcelos M, Stein DJ, **Gallas-Lopes M**, et al. Corticotropin-releasing factor receptor signaling and modulation. *Trends in Psychiatry and Psychotherapy*. 2020.

NON–PEER-REVIEWED OUTPUTS

Preprints (selected; n = 20)
(bioRxiv, Authorea, OSF/Research Square)

1. The Brazilian Reproducibility Initiative, **Gallas-Lopes M**, et al. Estimating the replicability of Brazilian biomedical science. *bioRxiv*. 2025.
2. **Gallas-Lopes M**, Muller DV, Stahlhofer-Buss T, Bastos LM, Becker SZ, Bruck SM, Piato A, Herrmann AP. Ketamine-induced NMDA receptor hypofunction alters social behavior in adult zebrafish. *bioRxiv*. 2025.

Systematic review & meta-Analysis protocols / registrations (n = 8)
(Open Science Framework (osf.io/5k9yv), PROSPERO)

Preregistrations & replication studies (n = 18)
(Open Science Framework (osf.io/5k9yv))

Reusable experimental & analytical protocols (n = 15)
(protocols.io; protocols.io/m4ule1y1s1v4yle1)

Open educational & training materials (n = 5)
(Open Science Framework (osf.io/5k9yv), Zenodo (zenodo.org/Gallas-LopesMatheus))

Conference proceedings (n =52)
(First author: 22, International presentations: 14)

GRANTS

1. **Meta-Science Project Grant** — Brazilian Reproducibility Network (RBR)
   Principal Investigator: Matheus Gallas-Lopes.
   Project: Panorama of preclinical systematic reviews conducted by Brazilian researchers — a diagnostic meta-research study on transparency, reproducibility, and methodological quality in Brazilian preclinical science.
2. **CAPES/PRINT** — Short-Term International Training Grant (2024)
3. **CAPES PhD Fellowship** — Brazil (2023 – Present)
4. **Undergraduate Research Scholarship (CNPq/UFRGS)** — awarded 6 consecutive times (2018–2022)

PEER-REVIEW SERVICE

Ad hoc peer reviewer for international journals, including:
Scientific Reports; Journal of Neuroscience Methods; Journal of Psychopharmacology; Pharmacological Reports; Journal of Fish Biology; Ecotoxicology and Environmental Safety; Journal of Toxicology and Environmental Health; JoVE.

SERVICE TO SCIENTIFIC ORGANIZATIONS

Member of multiple Task Forces — *Brazilian Reproducibility Network (BRN)* (2024 – Present)
Communications Task Force Member — *ILAE Young Epilepsy Section* (2023 – Present)
Social Media Editor — *Schizophrenia International Research Society (SIRS)* (2024 – 2025)

TRAINEES (CO-SUPERVISION)

- Amanda Patelli Alves – Undergraduate researcher, Pharmacy;
- Daniela Varisco Müller – Undergraduate researcher, Pharmacy;
- Francisco Marques da Silva Neto – Undergraduate researcher, Medicine;
- Gabriela Resmini Ramalho – Undergraduate researcher, Veterinary Medicine;
- Pedro Lucas Neves Iozzo Campos – Undergraduate researcher, Medicine.