

Gabrielle Magalhães Earley

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Education

- 2022 - **Doctoral Student**, *Boston University*.
Incoming Fall 2022.
- 2017 - 2021 **Bachelors of the Arts in Psychology**, *The University of Texas at San Antonio*.
With Honors, 3.72/4.00.

Research Experience

- 01/22 - 08/22 **Research Technician**, *Meyer Lab*, Boston University.
Research the development of ventral hippocampal projections to the prefrontal cortex and its role in facilitating learning to distinguish between fear and safety. Detailed Responsibilities:
- Process brain tissue for ex-vivo analysis through transcardial perfusions, brain extraction, immunohistochemical staining, and imaging.
 - Manage laboratory supply, equipment, and behavioral paradigms used within various lines of research.
 - Supervise and mentor undergraduates on laboratory research techniques.
- 04/21 - 12/21 **Research Assistant**, *Burgos Lab*, University of Texas at San Antonio.
Researched the role of ventral hippocampal projections to the prefrontal cortex in threat learning & active avoidance. Detailed Responsibilities:
- Process brain tissue for ex-vivo analysis through transcardial perfusions, brain extraction, mounting, & imaging.
 - Perform stereotaxic surgeries injecting DREADDs or optogenetic viral vectors or implantation of optical fiber implants.
 - Run behavioral paradigms assessing active avoidance learning using a novel dynamic platform avoidance task & other avoidance and stress paradigms.
 - Supervise and mentor undergraduates on laboratory research techniques.
- 10/19 - 05/21 **Undergraduate Research Assistant**, *Swan Lab*, University of Texas at San Antonio.
Computationally modeled the development of Post-Traumatic Stress Disorder using human patient symptom data. Detailed Responsibilities:
- Computationally modeled the contribution of mental health comorbidities and self-perception of community integration to overall PTSD symptom severity.
 - Managed the storage of collected behavioral data from human participants and executed subsequent analysis of collected data.
 - Administered cognitive and behavioral assessments to human research participants and conducted in-depth structured interviews regarding prior head injury or history of anxiety.

Posters

- [1] **Magalhães, G.***, Garza, M. C.*, Felix-Ortiz, A.C., Diehl, M. M., & Burgos-Robles, A. (2021), "Active avoidance learning during a dynamic platform avoidance task requires processing in the medial prefrontal cortex and ventral hippocampal inputs." Poster presented at Pavlovian Society Annual Meeting 2021, Ann Arbor, MI., 1 October 2021.
- [2] **Garza, M.C.**, Magalhães, G., Felix-Ortiz, A.C., Wood, R. M., Hajali, D. T., Arriaga, D.T., Msengi, H.D., Diehl, M. M., & Burgos-Robles, A. (2021), "New insights on the role of distinct prefrontal cortical divisions using a novel task for active avoidance learning that involves a dynamic option for safety (P660.11)." Virtual Poster Presented at Society for Neuroscience 2021, 8 November 2021.

- [3] **Magalhães, G., Swan, A. A., & Pugh, M. J.**, "Reintegration partially mediates the relationship between problematic sleep and post-traumatic stress disorder symptom severity in post-9/11 veterans" Talk given at Seventh Annual SAMHS and Universities Research Forum (SURF 2021), San Antonio, TX., 10 June 2021.
- [4] **Magalhães, G., Swan, A. A., & Pugh, M. J.**, "The combined influence of post-traumatic stress disorder and depression on somatization among post-9/11 veterans" Virtual poster presented at SACNAS 2020, 19 October 2020.

*Denotes co-authorship.

Scholarships, Awards, & Grants

- 10/21 **Trainee Professional Development Award**, *Society for Neuroscience*.
Travel award for undergraduate and graduate students who demonstrate scientific merit and excellence in research.
- 04/21 **Nomination for University Student Life Awards**, *UTSA*.
Nominated for awards recognizing undergraduate students who crafted powerful academic legacies at UTSA.
- 12/20 **Experiential Learning Fair Award in Professional Development**, *UTSA*.
Award recognizing exemplary professional development in conducting undergraduate research and pursuing a career in neuroscience research.
- 09/20 - 12/20 **Provost's Undergraduate Research Fellowship**, *UTSA*.
Funded research fellowship position for Fall 2020 awarded to outstanding undergraduates performing independent, original research.
- 09/20 **Travel Award SACNAS 2020**, *SACNAS*.
Travel award for undergraduate to present research at SACNAS 2020.
- 05/20 - 05/21 **MARC-U*STAR Fellowship**, *National Institutes of Health*.
Competitive scholarship awarded to 12 honors students at UTSA of underrepresented backgrounds actively conducting STEM research.
- 2020 - 2021 President's List
2019 Dean's List

Research Skills

Animal Use	C57 Mice (adolescent & adult), mouse handling, colony management.	Behavior	Platform avoidance, elevated plus maze, open field test, fear conditioning.
Microscopy	Fiber photometry (novice).	Optogenetics	Optical ferrule construction, optical plug-in, and acute & chronic laser light stimulation.
Stereotaxic Surgery	Viral construct injection, optical fiber implantation, and DREADDs injections.	Histology	Transcardial perfusion, tissue slicing & staining, tissue mounting.
Programming	R (Intermediate), Python (Novice), LaTeX (Intermediate).	Statistical Programs	IBM SPSS (Proficient), GraphPad Prism (Proficient).
Software	DeepLab Cut (Novice), Ethovision (Novice), ANY-Maze (Proficient).		

Service

Professional

- 10/19 - 05/21 Vice President of Psi Chi Honor Society in Psychology chapter at UTSA.
- 04/21 Interviewer for UTSA ESTEEMED Scholars Program Fall 2021 Admissions Cycle.
- 04/21 - Member & Presenter for BrainY Bunch Neuroscience Monthly Journal Club.
- 09/20 Reviewer for UTSA MARC/RISE Fall Poster Session.
- 06/20 Reviewer for UTSA MARC/RISE Summer Poster Session.

Community

- 03/22 Science Fair Judge for biology and psychology projects presented at either the Middle School & High School Divisions of the 76th Boston Public Schools Science Fair.
- 12/20 Science Fair Judge for biology and psychology projects presented at John Jay Science and Engineering Academy of San Antonio.
- 06/20 - 08/20 Volunteer and Interviewer for Prospera Housing Community Services.
- 08/18 - 12/18 Volunteer and Curator for Institute of Texan Cultures to design and curate exhibit discussing the history of Foster Care.

References

- Mentor Dr. Heidi Meyer, Assistant Professor at Boston University. *hcmeyer@bu.edu*
- Former PI Dr. Anthony Burgos-Robles, Assistant Professor at UT San Antonio. *anthony.burgos-robles@utsa.edu*
- Former PI Dr. Alicia Swan, Assistant Professor at UT San Antonio. *alicia.swan@utsa.edu*