

**Amy Nicole Zwierzchowski-Zarate, Ph.D.**  
**Curriculum Vitae**

**Education**

- 2022 Ph.D. UT Southwestern  
Neuroscience  
Supervising Professor – Marc Diamond, M.D.  
Center for Alzheimer’s and Neurodegenerative Diseases  
Mechanisms of Disease and Translational Science Track  
HHMI Med into Grad Scholar  
Thesis – “RNA drives pathogenicity and diversity of tau strains”
- 2015 M.S. UT Dallas  
Applied Cognition and Neuroscience
- 2013 B.S. UT Dallas, *cum laude*, Major Honors  
Neuroscience  
Supervising Professor – Marco Atzori, Ph.D.  
Thesis – “Cerebrolysin reverses inhibitory deficits in an environmental rat model of autism”

**Teaching Experience**

- 2023-Present Assistant Professor of Instruction, Neuroscience  
UT Dallas  
Courses –  
Fall 2023: Cellular Neuroscience, Special Topics: Tauopathies,  
Neuroscience Laboratory Methods
- 2022-2023 Lecturer I, Neuroscience  
UT Dallas  
Courses -  
Spring 2023: Neuropharmacology, Cellular Neuroscience,  
Neuroscience Laboratory Methods.  
Fall 2022: Introduction to Neuroscience, Neuroscience Laboratory  
Methods.
- 2019 Course Director, & Lecturer, Undergraduate Neuroscience  
UT Southwestern  
Course –  
Summer 2019: “Exploring the far reaches of the brain”  
For visiting summer undergraduate research fellows
- 2019 Guest Lecturer for Neurobiology of Learning and Memory  
UT Dallas  
Course director - Krista McIntyre, Ph.D.
- 2016-2018 Lecturer, Ph.D. Core Course  
UT Southwestern  
Courses –  
Summer 2018: Intro to Scientific Literature

Fall 2017: Experimental Design  
Fall 2018: Experimental Design  
Course directors - Deb Evalds, M.Ed., Thomas Wilkie, Ph.D.

2012-2013 Teaching Assistant  
UT Dallas  
Spring 2013: Neuropharmacology  
Spring 2012: Behavioral Neuroscience  
Fall 2012: Behavioral Neuroscience  
Course directors - Lucien Thompson, Ph.D., Van Miller, M.D., Ph.D.

2011-2012 Course Designer/Teacher  
UT Dallas  
Fall 2011 & 2012: APO Math & Science Camp  
Neuroscience, Grade Level: 6th-8th

### **Other Academic Positions & Service**

2023-Present Career Mentor, UT Dallas  
E.N.S.U.R.E.

2023 Science Communications, UT Southwestern  
Lyda Hill Department of Bioinformatics

2022-Present Freelance Science Writer, Alzheimer's Association  
Translate scientific grants into lay friendly format for national website

2020-Present Medical Research Advisory Committee, Alzheimer's Association  
Dallas and Northeast Texas Chapter

2022 Science Communications, UT Southwestern  
Office of Development  
Assisted with writing and translating scientific findings for grant submissions from a variety of biomedical fields.

2019-2022 National Science Foundation Education Outreach Fellowship  
Supervising professor - Kendra Frederick, Ph.D.  
Established partnership with community educators to facilitate scientific outreach program with goal of enrichment of scientific classroom curriculum and quantification of effects of scientific outreach on student performance and attitudes toward STEM fields. Developed IRB approved materials and surveys. Coordinated program logistics. Assisted with curriculum development and implementation.

2015-2021 Director of marketing, Alliance of Women Scientists  
UT Southwestern

2017-2019 Admissions Committee, UT Southwestern Graduate School  
of Biomedical Sciences

- 2016-2019 Career Leadership Committee, UT Southwestern Graduate School of Biomedical Sciences
- 2016-2018 Students Emerging Academy of Leaders, UT Southwestern Graduate School of Biomedical Sciences
- 2013-2015 Research Study Coordinator/Outreach & Education Coordinator  
 UT Southwestern Medical Center Alzheimer's Disease Center  
 Director - Roger Rosenberg, M.D.  
 Education Core Leader - Mary Quiceno, M.D.  
 Coordinate educational outreach activities, co-lead Education Core of Alzheimer's Disease Center, deliver presentations to the academic, general, and professional community; organize annual conference; facilitate Community Focus Group aimed at increasing minority participation in research; coordinate annual neuroscience symposium; initiated inaugural community conference on dementia; collaborate with local Alzheimer's Association chapter; work with students from elementary to college level; assist in facilitating dementia caregiver's support group.  
 Coordinate research study procedures and associated regulatory aspects; maintain local and national research data; oversee entry of research data, coding, retrievals, adjustments, and additions; Administer neuropsychological testing (CDR, NPI); interview research study subjects and family members; Screen, recruit and enroll subjects.
- 2011-2013 Student Research Assistant  
 University of Texas at Dallas  
 Laboratory of Synaptic and Cellular Physiology  
 Director - Marco Atzori, Ph.D.

**Other Employment**

- 2001- 2010 Purchasing Supervisor  
 Verizon Logistics  
 Product Lines: Fleet, Fiber Optics  
 Managed \$30 Million cable inventory while maintaining successful material availability standards; Managed purchasing team of third largest national fleet with over \$34 Million in annual spend and over 360,000 annual transactions; worked cross-functionally to develop processes and conduct training; worked with vendors and customers to resolve escalated situations; generated and analyzed reports to track spend, efficiency, and error resolution.

## Publications

**Zwierzchowski-Zarate, AN**, Mendoza-Oliva, A., Kashmer, O.M., Collazo-Lopez, J.E., White III, C.L., Diamond, M.I. "RNA specifies unique tau strains and stabilizes Alzheimer's disease seeds." *JBC* (2022): DOI:<https://doi.org/10.1016/j.jbc.2022.102132>.

Roychowdhury, S, **Zwierzchowski, AN**, Garcia-Oscos, F, Olguin, RC, Delgado, RS, Atzori, M. "Layer- and Area-Specificity of the Adrenergic Modulation of Synaptic Transmission in the Rat Neocortex." *Neurochemical Research* (2014): 10.1007/s11064-014-1440-x.

## Abstracts & Posters

**Zwierzchowski-Zarate, A.**, and Diamond, M.I. (2021) RNA induces and stabilizes unique conformations of tau. The Federation of American Societies for Experimental Biology (FASEB) Protein Aggregation Conference, Virtual. June. **Selected for short talk.**

**Zwierzchowski-Zarate, A.**, and Diamond, M.I. (2019) Nucleic acids drive pathology and diversity of tau strains. Annual Mechanisms of Disease Translational Science Track/Integrative Molecular and Biomedical Sciences Poster Session, UT Southwestern Medical Center, Dallas, TX. February. **Won Best Poster.**

**Zwierzchowski-Zarate, A.**, Woodard, D., and Diamond, M.I. (2018) Unraveling tau-RNA interactions to understand neurodegenerative disease. Annual Neuroscience Retreat, UT Southwestern Medical Center, Dallas, TX. April.

**Zwierzchowski-Zarate, A**, Roychowdhury, S, Banerjee, A, Ogobuiro, I, Flores, G, Atzori, M (2013). Cerebrolysin recovers behavioral and physiological impairments in an environmental rat model of autism. Annual Society for Neuroscience Conference, San Diego, CA, November.

**Zwierzchowski-Zarate, A**, Roychowdhury, S, Banerjee, A, Atzori, M (2013). Cerebrolysin reverses deficits in synaptic inhibition of an environmental rat model of autism. UT Dallas Undergraduate Research Poster Contest, Richardson, TX, March.

## Honors & Awards

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| 2021 | Three minute thesis (3MT), third place, UT Southwestern   |
| 2021 | Chan Zuckerberg Initiative Neurodegeneration Community Challenge Network, Community project grant |
| 2021 | Selected for short talk, FASEB Protein Aggregation Conference                                     |
| 2019 | Ida M. Green Award, Finalist  |
| 2019 | Best Poster Award, UT Southwestern  |
| 2013 | Graduate Travel Award, UT Dallas  |

- 2013      BBS Honors, UT Dallas  
School of Behavioral and Brain Sciences
  
- 2013      Student Leadership Award, UT Dallas  
School of Behavioral and Brain Sciences
  
- 2013      Dean's Scholar Award, UT Dallas  
School of Behavioral and Brain Sciences
  
- 2012      Buhrmester Summer Undergraduate Research Award, University of Texas at Dallas  
School of Behavioral and Brain Sciences  
Research Topic: "Implications of Histone deacetylase 7 (HDAC7) in synaptic  
transmission and cognition: an inquiry to discover mechanisms that treat  
neurodegenerative disease"  
Advisors - Marco Atzori, Ph.D., and Santosh D'Mello, Ph.D.
  
- 2012      Undergraduate Research Scholar Award, University of Texas at Dallas  
School of Behavioral and Brain Sciences  
Research Topic: "Cerebrolysin as a treatment for synaptic impairment in an  
environmental rat model of autism"  
Advisor - Marco Atzori, Ph.D.
  
- 2009      Verizon Ovation Award, Verizon Logistics  
Streamlining of Fleet Operational Processes
  
- 2006      Verizon Excellence Award, Verizon  
Inventory Cost Reduction of \$170 Million
  
- 2006      Verizon Excellence Award Finalist, Verizon  
Design of Internally Sustainable Mentoring Program
  
- 2006      Buyer of the Year, Verizon Logistics