



CURRICULUM VITAE

Sydney M. Vita, Ph.D.

Current Title: Assistant Professor, Department of Physiology

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Education:

Undergraduate: Community College of Denver, Denver, CO (AA Psychology, 2013)
University of Colorado Denver, Denver, CO (BA Psychology, 2015)

Graduate: University Mississippi Medical Center, Jackson, MS (PhD Neuroscience,
2020)

Postdoctoral: LSU Health Science Center, New Orleans, LA (Physiology, 2020 - 2024)

Languages: English and American Sign Language

Certifications and Credentials:

2019 – Present Adult CPR, AED, and First Aid - FirstAidforFree.com

Academic, Professional, and Research Appointments:

2015 – 2018	Neuroscience Laboratory University of Mississippi Medical Center, Jackson, MS	Graduate Research Assistant
2018 – 2020	Neuroscience Laboratory University of Texas Health Sciences, Houston, TX	Graduate Research Assistant
2020 – 2024	Department of Physiology LSUHSC, New Orleans, LA	Postdoctoral Fellow
2024 – Present	Department of Physiology LSUHSC, New Orleans, LA	Assistant Professor

Membership in Professional Organizations:

2016 – present	Society for Neuroscience (SfN)
2016 – 2017	Mississippi Academy of Sciences
2017 – present	National Neurotrauma Society (NNS)
2017 – present	Women in Neurotrauma Research (WiNTR) <ul style="list-style-type: none">• 2023 - present: Training Education and Mentoring (TEAM) Committee• 2023 - present: Visiting International Scholar Award (WiNTR-VISA) Committee
2017 – 2018	International Brain Injury Association (IBIA)
2021 – present	Postdoctoral Association, LSUHSC <ul style="list-style-type: none">• 2021 - 2022: Vice President
2021 – present	American Physiological Society (APS)
2021 – present	Research Society on Alcoholism (RSA)
2021 – present	Diversity, Equity, and Inclusion Committee; LSUHSC Grad School
2021 – present	Diversity, Equity, and Inclusion Committee; Physiology Department
2022 – present	ATHENA By Women In STEM (ABWIS)
2023 – present	International Brain Barriers Society
2021	Organizing Committee member, Alcohol and Drug Abuse Center of Excellence (ADACE) Spring Retreat, LSUHSC, New Orleans, LA
2023 – Present	Selection Committee Member, Alcohol and Drug Abuse Center of Excellence (ADACE) Postdoctoral Seminar Series, LSUHSC, New Orleans, LA <ul style="list-style-type: none">• 2024: Committee Chair

Awards and Honors:

2024	Teaching Excellence Award, LSUHSC School of Nursing
2019	Graduate Student Travel Award, National Neurotrauma Symposium
2018	Dee S. and Patricia Osborne Endowed Scholarship in the Neurosciences (\$2000)
2018	Mission Connect, Best Graduate Student Poster Award (\$100)
2018	School of Graduate Studies Research Day, Poster Presentation Award
2018	Graduate School Honors Day
2018	Neuroscience Research Day, Poster Presentation Award
2017	School of Graduate Studies Research Day, Poster Presentation Award
2017	Graduate School Honors Day
2017	Neuroscience Research Day, Poster Presentation Award
2017	Mississippi Academy of Sciences Research Day, Student Poster Award (\$100)
2016	School of Graduate Studies Research Day, Poster Presentation Award
2015	Graduated Magna Cum Laude
2013	College Responsibility Grant (\$2000)
2013	Graduated Cum Laude

TEACHING EXPERIENCE AND RESPONSIBILITIES

Formal Course Responsibilities:

- 2021 – Present Lecturer, Pathophysiology. Disorders of the Brain; Disorders of the Spinal Cord
LSUHSC School of Nursing (2h, twice/year) and CARE programs (1h,
twice/year)
- 2021 Lecturer, General and Oral Physiology. Endocrine Mechanisms 1 & 2 (2h)
LSUHSC School of Dentistry
- 2021 – Present Facilitator/Designer, “Imposter Syndrome? Who, me?” Workshop (1h/year)
LSUHSC, Postbaccalaureate Research Education Program in Biomedical
Sciences (PREP)
- 2021, 2024 Facilitator, PREP Workshop. Whistleblowing and Research Ethics (1h/year);
and Writing the Methods Section of your Manuscript (1h/year)
LSUHSC, Postbaccalaureate Research Education Program in Biomedical
Sciences (PREP)
- 2023 – Present Lecturer, Scientific Techniques. Introduction to Immunohistochemistry
(1h/year)
LSUHSC T35 Medical Student Alcohol Research Summer Internship
- 2023 Instructor, Pathophysiology. Innate Immunity; Adaptive Immunity; Alterations of
Pulmonary Function; Alterations of Digestive Function; and Alterations of
Cardiovascular Function
LSUHSC School of Nursing, RN to BSN program (5h)
- 2024 Instructor, Pathophysiology. Genes and Genetic Disease; Infection; Innate
Immunity; Adaptive Immunity; Alterations in Cognitive Systems, Cerebral
Hemodynamics, & Motor Function; Disorders of the CNS/PNS/NMJ; Alterations
of Pulmonary Function; Alterations of Digestive Function; and Alterations of
Cardiovascular Function.
LSUHSC School of Nursing, RN to BSN program (9h)

Students and Faculty Trained

Undergraduate:

- Spring 2021 Ra’Janae Morris, ENDURE Program Undergraduate
- Summer 2021 Shannon Sullivan, Undergraduate Summer Research
Elizabeth Odynocki, Undergraduate Summer Research (3rd place Research
Day poster)
- Summer 2023 Felicia Wishnia, Tulane University
- Fall 2023 Myhea Hollingsworth, Xavier University
Izzy Krawitz, Tulane University
- Summer 2024 Amare Landry, Xavier University

Masters:

- 2022 - 2023 Abigail Jahnke, Tulane University

Graduate:

- Fall 2021 Derek Wiltz, LSUHSC

RESEARCH AND SCHOLARSHIP

Grants and Contracts:

SUBMITTED:

2L40AA030413-02

07/01/2024 – 06/30/2026

Loan Repayment Program (LRP)

\$61,500.00

NIH/NIAAA

The goal is to retain highly qualified health professionals into biomedical research careers by repaying a portion of qualified educational debt in exchange for a commitment to NIH mission-relevant research.

Role: Principal Investigator

ACTIVE:

K01 1K01AA031516-01

07/01/2024 – 06/31/2029

Mentored Research Scientist Development Award

\$171,637/year

NIH/NIAAA

Adolescent alcohol exposure exacerbates rmTBI associated BBB disruption and dementia risk

The goal is to investigate the combined roles of repeat mild TBI and intermittent alcohol exposure during adolescence on acute blood-brain barrier disruptions, and how those disruptions may then relate to the development of dementia-associated proteinopathies later in life.

Role: Principal Investigator

1L40AA030413-01

07/01/2022 – 06/30/2024

Loan Repayment Program (LRP)

\$81,146.15

NIH/NIAAA

The goal is to retain highly qualified health professionals into biomedical research careers by repaying a portion of qualified educational debt in exchange for a commitment to NIH mission-relevant research.

Role: Principal Investigator

COMPLETE:

F32 1F32AA030496-01A1

12/01/2022 – 11/30/2023

Ruth L. Kirschstein NRSA Postdoctoral Fellowship

\$67,174/year

NIH/NIAAA

Alcohol exposure exacerbates inflammation and anxiety-like behavior induced by repeated mild TBI during adolescence.

The goal is to investigate the combined roles of TBI and alcohol exposure on neuroinflammation and the development of anxiety during adolescence.

Role: Principal Investigator

T32 AA007577 (PI: Molina, PE)

09/01/2009–11/30/2024

NIH/NIAAA

\$402,449/year

Biomedical Alcohol Research Training Program

The goal is to educate and train pre- and postdoctoral fellows for careers as independent scientists in the field of alcohol research.

Role: Postdoctoral Trainee, November 2020 – present

NOT FUNDED:

DM230040 - GRANT14013610 (PI: Irving, BA)

07/2024 – 06/2027

Trauma Immunology Research Award (TIRA)

\$1,576,503

Defense Medical Research and Development Program (DMRDP)

Mechanisms of Immune and Energetic Dysfunction Following Combined Burn and TBI
The goal is to use an innovative murine model of polytrauma to study the independent and combined effects of severe burn injury and mild-TBI (mTBI) on wound healing, systemic soluble and cellular immunity, and local and immune phenotypes and bioenergetics of target organs.
Role: Co-Investigator

F32 AA030496-01

09/01/2022 – 09/01/2024
\$67,174/year

Ruth L. Kirschstein NRSA Postdoctoral Fellowship
NIH/NIAAA

Alcohol exposure exacerbates inflammation and anxiety-like behavior induced by repeated mild TBI during adolescence

The goal is to investigate the combined roles of TBI and alcohol exposure on neuroinflammation and the development of anxiety during adolescence.

Role: Principal Investigator

APS Postdoctoral Fellowship Grant

11/01/2021-

10/31/2022

The American Physiological Society

\$50,000

Binge alcohol and traumatic brain injury effects on the adolescent brain

The goal of this project was to assess whether binge alcohol exposure during adolescence exacerbated the inflammatory response and an anxiety-like phenotype caused by repeated mild traumatic brain injury.

Role: Principal Investigator

Publications:

Under Review:

1. Histological comparison of repeated mild weight drop and lateral fluid percussion injury models of traumatic brain injury (TBI) in female and male rats.
Accepted to Shock: May 2024

Journal Articles (Refereed)

1. **Vita, S.M.**; Dulin, J.N. In Memoriam: Ray Grill (1966-2018). *Neural Regen Res* 2018; 13: 1488.
2. Maynard, M.E.; Redell, J.B.; Zhao, J.; Hood, K.N.; **Vita, S.M.**; Kobori, N.; Dash, P.K. Sarm1 loss reduces axonal damage and improves cognitive outcome after repetitive mild closed head injury. *Experimental Neurology*, 327, 113207. <https://doi.org/10.1016/j.expneurol.2020.113207>
3. Redell, J. B., Maynard, M. E., Underwood, E. L., **Vita, S. M.**, Dash, P. K., & Kobori, N. (2020). Traumatic brain injury and hippocampal neurogenesis: Functional implications. *Experimental Neurology*, 331, 113372. <https://doi.org/10.1016/j.expneurol.2020.113372>
4. **Vita SM**, Grayson BE, Grill RJ. Acute damage to the blood-brain barrier and perineuronal net integrity in a clinically-relevant of rat model traumatic brain. *Neuroreport*. 2020;31: 1167–1174. doi:10.1097/WNR.0000000000001531
5. **Vita SM**, Redell JB, Maynard ME, Zhao J, Grill RJ, Dash PK, et al. P-glycoprotein Expression Is Upregulated in a Pre-Clinical Model of Traumatic Brain Injury. *Neurotrauma Rep*. 2020;1: 207–217. doi:10.1089/neur.2020.0034
6. **Vita, S.M.**, Cruise, S.C., Gilpin, N.W., & Molina, P.E. Histological comparison of repeated mild weight drop and lateral fluid percussion injury models of traumatic brain injury (TBI)

in female and male rats. *Accepted to the Journal of Shock, Inflammation, and Sepsis: Laboratory and Clinical Approaches*, May 1, 2024.

7. Histological comparison of repeated mild weight drop and lateral fluid percussion injury models of traumatic brain injury (TBI) in female and male rats.

Accepted to *Shock*, May 2024

Book Chapters:

1. **Vita, S.M.**, Smith, AM, Ray, TJ & Grayson, BE. Chapter 11 - Blood–brain barrier damage following mild traumatic brain injury. in *Handbook of Animal Models in Neurological Disorders* (eds. Martin, C. R., Patel, V. B. & Preedy, V. R.) 133–144 (Academic Press, 2023). doi:10.1016/B978-0-323-89833-1.00041-0.

Peer-Reviewed Abstracts (poster presentation unless noted; **mentee presenter):

1. **Vita, S.M.**; K.R. Clark, R.J. Grill. Acute pathophysiologies associated with mild, “head on” concussion injury in the Sprague-Dawley [abstract]. Program No. 322.07/Y8. 2016 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2016. Online.
2. **Vita, S.M.**; Grill, R.J. Pathophysiologies associated with cTBI in the Sprague-Dawley rat. Presented at the Mission Connect Symposium, Houston, TX, December 2, 2016 (Poster and Podium Presentations)
3. **Vita, S.M.**; Grill, R.J. Acute pathophysiologies associated with mild, “head on” concussion injury in the Sprague-Dawley rat. Presented at the Mississippi Academy of Sciences, Oxford, MS. February 23, 2017. *Received “Best Graduate Student Poster Presentation” Award
4. **Vita, S.M.**; R.J. Grill. Concussive TBI produces deficits to the blood–brain barrier and perineuronal nets in rats [abstract 0526]. (2017) Accepted Abstracts from the International Brain Injury Association’s 12th World Congress on Brain Injury, Brain Injury, 31:6-7, 719-1017, DOI:10.1080/02699052.2017.1312145
5. **Vita, S.M.**; Grill, R.J. mTBI and Neurovasculature. Presented at the Mission Connect Symposium. Houston, TX. November 30, 2019. (Poster Presentation) *Received “Best Graduate Student Poster Presentation” Award
6. **Vita, S.M.**, Grill, R.J., Dash, P. Neurovascular effects of single or multiple mTBIs. Presented at National Neurotrauma Symposium. Pittsburg, PA. July 2, 2019.
7. **Vita, S.M.**; Grill, R.J. mTBI and Neurovasculature. Presented at 25th Annual Neuroscience Poster Session. Houston, TX. December 1, 2019. (Poster Presentation) *Received the “Dee S. and Patricia Osborne Endowed Scholarship in the Neurosciences” for best overall poster.
8. Odynocki, E., **Vita, S.M.**, Molina, P.E. Examining the Blood-Brain Barrier Following Mild Traumatic Brain Injury. Presented at Summer Research Internship Program Virtual Poster Session, LSUHSC, New Orleans, LA, 2021. (**mentee presenter) 3rd Place Winner, Undergraduate Category
9. Sullivan, S., Schwartzenburg, J., **Vita, S.M.**, Molina, P.E. The Effect of Moderate TBI on Neuronal Degradation in the Spinal Cord. Presented at Summer Research Internship Program Virtual Poster Session, LSUHSC, New Orleans, LA, 2021. (**mentee presenter)

10. **Vita, S.M.**, Gilpin, N.W., Molina, P.E. Alcohol exposure exacerbates hippocampal inflammation induced by repeated mild TBI during adolescence. Presented at Research Society on Alcoholism, Orlando, FL, June 29, 2022
11. **Vita, S.M.**, Gilpin, N.W., Molina, P.E. Comparing repeat mild weight drop to lateral fluid percussion injury in male and female rats. Presented at the National Neurotrauma Symposium. Austin, TX. June 27, 2023.
12. **Vita, S.M.**, Gilpin, N.W., Molina, P.E. Alcohol exposure combined with repeat mild TBI during adolescence increases anxiety-like behavior in adolescent female and male rats. Presented at Research Society on Alcohol. Minneapolis, MN. June 24, 2024

Conference Participation:

1. Oral presenter. *Pathophysiologies associated with cTBI in the Sprague-Dawley rat*. 2016 Mission Connect Symposium - Houston, TX
2. Round Table Panelist. Disparities in Grant Funding and Health. Spring 2021 Alcohol and Drug Abuse Center of Excellence (ADACE) Retreat – New Orleans, LA

Invited Seminars and Talks:

1. “Comparing preclinical models of traumatic brain injury”, Greater New Orleans Society for Neuroscience Chapter, LSUHSC, New Orleans, LA, May 5, 2022
2. “F31 and F32 grant writing process”, Greater New Orleans Society for Neuroscience Chapter, Tulane University, New Orleans, LA, March 2, 2023 (with Jessi Cucinello-Ragland)
3. “Alcohol Exacerbation of Neuroinflammation Post-Repeated Mild TBI in Adolescence”, GRC: Alcohol and the Nervous System. Galveston, TX. February 13, 2024.
4. “Through dangers untold & hardships unnumbered: How I fought my way to a PhD.” Guest Lecture for Honors 2050-CHARGE Mentorship. University of Utah, via Zoom. April 4, 2024.
5. “Neurodegenerative Consequences of Blood-Brain Barrier Injury”, LSUHSC Physiology Dept Seminar Series. New Orleans, LA. April 18, 2024

Continuing professional education, refresher courses, & workshops at professional meetings/symposia:

1. Perspectives in Alcohol Research (PAR), Louisiana State University Health Sciences Center, Fall 2020-present.
For one hour each week during long semesters, trainees and faculty members in the alcohol research field discuss relevant topics including recently published alcohol-related literature, model systems and techniques, and research ethics. This elective is discussion-based and trainees lead the majority of sessions. 15 hours per semester, Instructors: Robert Siggins, PhD
2. Breaking the Glass Ceiling in Leadership Positions, Webinar organized by the American Physiological Society’s DEI Committee, January 19, 2022; online
3. New Reviewer Training Session, an on-demand webinar by the American Physiological Association. Watched March 9, 2022; online
4. Mitigating Implicit Bias/Microaggressions in Mentoring: A DEI Workshop, RSA 45th Annual Scientific Meeting, June 25, 2022; Orlando, Florida
5. NIAAA-Supported Research: A Grants Skills Workshop organized by the RSA Education Committee, RSA 45th Annual Scientific Meeting, June 28, 2022; Orlando, Florida
6. Importance of Mentorship at All Career Levels APS DEI Webinar, organized by American Physiological Society’s DEI Committee, October 24, 2022; online

7. Tools to Mitigate Microaggressions Professional Development Workshop, organized by the Postbaccalaureate Research Education Program (PREP) at LSUHSC, February 27, 2023; LSUHSC- New Orleans, LA
8. How Your Grant Application is Reviewed: NIH 101, a grant writing workshop organized by the Alcohol and Drug Abuse Center of Excellence (ADACE), September 8, 2023; LSUHSC- New Orleans, LA
9. Role of Alcohol Misuse in the Onset and Progression of Alzheimer’s Disease and Its Related Dementias, a joint workshop of the NIA and NIAAA, July 26-27, 2023; Online

SERVICE ACTIVITIES

University/Institutional Service:

2016	<u>Volunteer</u> , Discovery U, Mississippi Children’s Museum, Jackson, MS
2019	<u>Volunteer</u> , Brain Night for Kids, McGovern Museum of Health & Medical Science, Houston, TX
March 2021	<u>Volunteer Interviewer</u> , Mock Job Interviews, Association of Women in Science – Southern Louisiana Chapter, LSUHSC, New Orleans, LA
April 2021	<u>Judge</u> , Trainee Talks, Alcohol and Drug Abuse Center of Excellence (ADACE) Retreat, LSUHSC, New Orleans, LA
2021 – 2023	<u>Member</u> , Graduate School Diversity, Equity and Inclusion Committee, LSUHSC, New Orleans, LA
2021 – Present	<u>Member</u> , Department of Physiology Diversity, Equity and Inclusion Committee, LSUHSC, New Orleans, LA

National Service:

2016 – 2018	<u>Volunteer Fundraiser & Participant</u> , Walk to Defeat ALS
2017 – 2018	<u>Volunteer</u> , Crisis Text Line
2022 – 2023	<u>Volunteer Mentor</u> , Talaria Summer Institute. Talaria Summer Institute (TSI) is a free STEM research mentorship summer program for female and genderqueer high school students (rising high school freshmen to rising college freshmen).

Community Service and Outreach Activities:

March 2017	<u>Cheerleader</u> (Krewe de Wonder Women), Youth Run NOLA, New Orleans, LA
February 2018	<u>Judge</u> , VEX Robotics Tournament, Jackson, MS
2021 – 2022	<u>Volunteer</u> , School Gardening Project, Homer Plessy Community School, Tremé, New Orleans, LA
February 2021	<u>Judge</u> , Greater New Orleans Science and Engineering Fair, Senior Division of Biomedical Health and Translational Sciences; Senior Division of Computational Biology, Bioinformatics and Biomedical Engineering, New Orleans, LA
2021 – present	<u>Board Member</u> , Historic Faubourg Tremé Association (HFTA), New Orleans, LA <ul style="list-style-type: none"> • 2024: Secretary
March 2022	<u>Volunteer</u> , Bookfest with Books & Brains, Tulane University, New Orleans, LA
March 2023	<u>Interactive Learning Event</u> on “The importance of helmets.” Audience: Pre-K students. Morris Jeff Community School, New Orleans, LA