

Dr. Jhah

Anabirae

CURRICULUM VITAE

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Professional Profile

Neuroscientist with a Ph.D. from Yale School of Medicine and interdisciplinary training in neuroscience, biology, chemistry, pharmacology, and translational research. Experienced in experimental design, *in vivo* neurochemical imaging, behavioral neuroscience, scientific literature synthesis, technical writing, and cross-functional collaboration. Began college full-time at 16 years old then transitioned into a full-time PhD student at 20 years old. Completed the PhD in under 5 years of study.

Education

Doctor of Philosophy in Neuroscience, Yale School of Medicine, New Haven, CT

July 2026

Interdepartmental Neuroscience Program | Advisor: Dr. Alfred P. Kaye

Dissertation: *Neuropeptide Modulation of Noradrenergic Arousal Dynamics During Conditioned Threat*

Master of Business Administration, Artificial Intelligence Specialization, University of South Carolina Aiken

Expected May 2027

Program dates: Aug 2026-May 2027.

Master of Philosophy in Neuroscience, Yale University, New Haven, CT

December 2023

Bachelor of Science in Biology, Mississippi Valley State University, Itta Bena, MS

May 2021

Bachelor of Science in Chemistry, Mississippi Valley State University, Itta Bena, MS

May 2021

GPA: 3.9/4.0 | Summa cum laude | Entered college full-time at age 16.

Professional Experience

Global Medical Affairs Publications Operations Intern, Johnson & Johnson Innovative Medicine, Raritan, NJ

Jun-Aug 2025

- Selected as 1 of 10 interns (~3% acceptance rate) globally for the Janssen Global Medical Affairs Summer Internship Program.
- Supported global publications strategy through literature review, evidence synthesis, clinical-data analysis, and development of scientific materials aligned with therapeutic-area medical plans.
- Evaluated AI-assisted scientific fact-checking and quality-control workflows, identifying opportunities to improve accuracy, consistency, and efficiency.
- Collaborated with medical affairs, clinical, publications, and scientific communications teams on manuscripts, abstracts, posters, and evidence-dissemination initiatives.
- Presented project outcomes and strategic recommendations to Global Medical Affairs leadership.

Consultant/Lead Researcher, Freedom Biosciences, Remote

Nov 2023-Jan 2024

- Evaluated the scientific merit and translational rationale of drug-combination strategies through extensive literature review and critical analysis of preclinical evidence.
- Synthesized findings into decision-ready reports and presentations and supported experimental-design and preclinical-development strategy.
- Strengthened proposed proof-of-concept study designs and maintained a curated compendium of project ideas, biological rationales, commercial considerations, and key development risks.

Consultant, Lieber Institute for Brain Development, Remote

Aug-Oct 2023

- Tracked active grant portfolios, project periods, milestones, no-cost extensions, and Research Performance Progress Report deadlines.
- Maintained accurate grant records and drafted timely communications to principal investigators regarding reporting requirements and submission deadlines.

Psychology Accessibility Coordinator, Yale University, New Haven, CT

Aug-Dec 2023

- Coordinated accommodations for 50+ students and partnered with 10+ faculty members to adapt course materials, assignments, and examinations in compliance with ADA standards.
- Streamlined communication among students, faculty, and Student Accessibility Services, reducing accommodation-response times by 30%.

Research Experience

Doctoral Researcher, Yale University School of Medicine

2021-2026

Neuropeptide Modulation of Noradrenergic Arousal Dynamics During Conditioned Threat

- Designed and executed a multi-year research program examining corticotropin-releasing factor (CRF/CRFR1) control of noradrenergic arousal and stress-sensitized threat behavior.
- Integrated pharmacology, *in vivo* norepinephrine fiber photometry, behavioral analysis, pupillometry, motion sequencing (MoSeq), and optogenetics to address mechanistic and translational questions.
- Developed and optimized a modified stress-enhanced fear-learning paradigm and analyzed complex, occasionally counterintuitive datasets to generate defensible scientific conclusions.
- Authored a doctoral dissertation, research protocols, abstracts, fellowship materials, and presentations for scientific audiences including NIH, the Society for Neuroscience, and the Molecular Psychiatry Association.

Researcher, Yale University

Spring-Summer 2022

Gene Replacement Therapy for Neurofibromatosis Type 1 (NF1)

- Investigated *in vivo* gene-replacement approaches for NF1 using GFP constructs and plexiform neurofibroma cell lines.
- Performed aseptic cell culture, flow cytometry, and quantitative assessment of genetic modification and therapeutic outcomes.
- Contributed to translational evaluation of gene-replacement strategies for neurofibromas affecting the nervous system.

Research Intern, Naval Research Laboratory

Summer 2021

Transmission Electron Tomography of Metal Nanoparticles and Ceramic Aerogels

- Compiled and analyzed transmission-electron tomograms of titanium-oxide aerogels containing gold nanoparticles to investigate catalytic behavior.
- Applied machine-learning tools to identify regions of interest and generate raw-data and meshed visualizations.
- Translated technical findings into clear reports for scientific and nontechnical audiences.

Research Intern, Johns Hopkins University

Summer 2020

Effects of COMT Inhibition on Dopamine Kinetics

- Used fast-scan cyclic voltammetry to quantify extracellular dopamine kinetics following stimulated release and COMT inhibition.
- Evaluated relationships between inhibitor pharmacokinetics and pharmacodynamics to identify compounds with *in vivo* efficacy.
- Analyzed complex datasets and presented findings to scientific and nontechnical stakeholders.

Research Intern, Walter Reed Army Institute of Research, Silver Spring, MD

Summer 2020

Transcriptomic Investigation of Rodent Brains Collected Under the NASA Rodent Research-2 Program

- Conducted microRNA sequencing analysis of brain tissue from microgravity-exposed rodents and time-matched ground controls using CLC Genomics.
- Performed time-course analyses to examine molecular adaptations associated with extended habitation in space.
- Integrated bioinformatics findings with experimental data and communicated results to an interdisciplinary research team.

Undergraduate Researcher, STEM Changers, Mississippi Valley State University

2018-2020

Nanotoxicity in a Chlamydomonas reinhardtii Model of Oxidative Stress

- Investigated nanotoxicity, oxidative stress, and reactive-oxygen-species production in Chlamydomonas reinhardtii.
- Performed DNA alignments and used GenBank data to construct a phylogenetic tree focused on antioxidant genes.
- Integrated experimental and bioinformatics approaches and presented findings to scientific audiences.

Chemistry Research Intern, Mississippi Valley State University

Summer 2019

Binding of Salmonella Lipopolysaccharide to Zinc-Oxide and Silver Nanoparticles

- Investigated nanoparticle-lipopolysaccharide binding and its relationship to antibacterial activity, oxidative stress, and cellular death.
- Integrated chemical and biological analyses to interpret mechanisms underlying nanoparticle-associated antibacterial effects.

Bioinformatics Institute Intern, Mississippi Valley State University

Summer 2019

Augmented-Reality Construction of an Alzheimer's Disease Drug Molecule

- Constructed a three-dimensional leuco-methylthionium molecule using augmented reality to support visualization and interaction with a potential drug candidate.
- Presented the application of augmented reality to molecular visualization and drug-development workflows.

Laboratory and Computational Skills

Molecular and Cellular: qPCR; aseptic cell culture; DNA, mRNA, and nucleic-acid extraction; DNA amplification and sequencing; gel electrophoresis; plasmid purification; UV spectrophotometry; immunohistochemistry; media preparation; and flow cytometry.

In Vivo and Surgical: Rodent handling; whole-brain tissue collection and dissection; retro-orbital blood collection in mice; pharmacological administration; small-animal surgery; and stereotaxic brain surgery.

Behavioral and Imaging: Fiber photometry; *in vivo* norepinephrine imaging; pupillometry; optogenetics; motion sequencing (MoSeq); fear conditioning; stress-enhanced fear learning; open-field testing; and additional rodent behavioral paradigms.

Computational and Quantitative: GraphPad Prism, MATLAB, SPSS, CLC Genomics, quantitative data interpretation, image analysis, scientific visualization, and literature-based technology assessment.

Scientific Communication: Dissertation and technical writing; abstracts; fellowship and grant materials; research protocols; manuscripts; scientific posters; oral presentations; evidence synthesis; and executive-ready summaries.

Research Presentations

National Institutes of Health, Bethesda, MD

Fall 2024

The Interplay of Stress Neuromodulators: Corticotropin-Releasing Factor and Norepinephrine Interactions in Threat

Oral and poster presentations

Society for Neuroscience, Chicago, IL

Fall 2024

The Interplay of Stress Neuromodulators: Corticotropin-Releasing Factor and Norepinephrine Interactions in Threat

Poster presentation

Molecular Psychiatry Association Conference, Kailua-Kona, HI

Spring 2024

The Interplay of Stress Neuromodulators: Corticotropin-Releasing Factor and Norepinephrine Interactions in Threat

Poster and oral presentations | Young Investigator Travel Award

National Institutes of Health, Bethesda, MD

Fall 2023

Corticotropin-Releasing Factor Dynamics in Learned and Innate Threat

Poster presentation

Society for Neuroscience, Washington, DC

Fall 2023

Corticotropin-Releasing Factor Dynamics in Learned and Innate Threat

Poster presentation

SPINES Symposium, Marine Biological Laboratory, Woods Hole, MA

Summer 2023

Corticotropin-Releasing Factor Dynamics in Learned and Innate Threat

Oral presentation

NEURON Conference, Quinnipiac University, Hamden, CT

Spring 2023

Corticotropin-Releasing Factor Dynamics in Learned and Innate Threat

Oral presentation

Howard Hughes Medical Institute Conference at Janelia

Spring 2023

Corticotropin-Releasing Factor Dynamics in Learned and Innate Threat

Poster presentation | Travel Award

NeuroDay Data Blitz, Yale University

Fall 2022

Gene Replacement Therapy for Neurofibromatosis Type 1

Oral presentation

Leadership Alliance Virtual National Symposium

Summer 2020

Utilizing Electrochemistry to Understand the Effects of COMT Inhibition on Dopamine Kinetics

Oral presentation

Amgen Scholars U.S. Symposium, Johns Hopkins University

Summer 2020

Utilizing Electrochemistry to Understand the Effects of COMT Inhibition on Dopamine Kinetics

Oral presentation

Annual Biomedical Research Conference for Minority Students

Fall 2020

Spaceflight Duration Impacts Brain Function: Transcriptomic Investigation of Rodent Brains Collected Under the NASA Rodent Research-2 Program

Poster presentation

Mississippi Academy of Sciences, Jackson, MS <i>Investigations of Nanotoxicity in a Chlamydomonas reinhardtii Algal Species Model as It Relates to Oxidative Stress</i> Oral presentation 2nd Place, Cellular, Molecular, and Developmental Biology Division	Spring 2020
Emerging Researchers National Conference, Washington, DC <i>Investigations of Nanotoxicity in a Chlamydomonas reinhardtii Algal Species Model as It Relates to Oxidative Stress</i> Oral presentation Travel Award	Spring 2020
Minority Science and Engineering Improvement Program Conference, U.S. Department of Education, Washington, DC <i>Binding Interaction of Salmonella Lipopolysaccharide with Zinc-Oxide and Silver Nanoparticles</i> Poster presentation	Fall 2019
Research Day, Mississippi Valley State University <i>Investigations of Nanotoxicity in a Chlamydomonas reinhardtii Algal Species Model as It Relates to Oxidative Stress</i> Oral presentation 1st Place, STEM Division	Spring 2019

Teaching and Mentorship Experience

Graduate Teaching Fellow, Biochemistry and Biophysics, Yale University	Fall 2025
Graduate Teaching Fellow, Foundations of Systems Neuroscience, Yale University	Spring 2025
Graduate Teaching Fellow, The Human Brain, Yale University	Fall 2024
Teaching Assistant, Yale PATHWAYS, Yale University - Facilitated hands-on STEM workshops and laboratory sessions for 100+ high school students in collaboration with a 10-person Yale team. - Coordinated and documented 10+ enrichment events and mentored 30+ students in scientific concepts, assignments, and research projects.	Summer 2024
Graduate Teaching Fellow, Neuroimaging in Neuropsychiatry II: Clinical Applications, Yale University	Fall 2023
Independent Research Mentor, Lumiere Education LLC, Remote - Mentored 13+ international and domestic high school students through original scientific research projects. - Guided literature review, question development, study design, data interpretation, and scientific communication through individualized research plans and iterative feedback.	2022-Present
Traveling Proctor, Student Accessibility Services, Yale University	Spring 2023-Present
Graduate Teaching Fellow, MDCB 105a: Biology, the World, and Us, Yale University	Fall 2022
Tutor, Early Monitoring Alert Program, Mississippi Valley State University	2020-2021
Tutor, STEM Changers, Mississippi Valley State University	2018-2020

Leadership Experience

President, Yale Student Science Diplomats Led 10+ meetings and strategic initiatives that strengthened collaboration, scientific outreach, and organizational visibility across Yale and the broader community.	2022-2024
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- Graduate Chair of Service, Delta Alpha Pi Honor Society, Yale University** *2024-2026*
- Organized service projects, recruited volunteers, and built community partnerships across the greater New Haven area.
- President, Student Government Association Inc., Mississippi Valley State University** *2020-2021*
- Managed a \$100,000 budget, coordinated policy and campus-wide initiatives, and served as a liaison between students and university leadership.

Honors and Awards

- NIH Outstanding Scholar in Neuroscience Award Program (OSNAP) Awardee, National Institutes of Health** *Fall 2024*
- Selected as 1 of 15 scholars nationally.
- Fellow, Yale Center for Clinical Investigation, Yale University** *2024-2025*
- Neuroscience Scholars Fellow, Society for Neuroscience** *2023-2025*
- Selected as 1 of 20 scholars nationally.
- Graduate Student Fellow, NINDS T32: Neurobiology of Cortical Systems** *2023-2024*
- SPINES Scholar, Marine Biological Laboratory** *Fall 2023*
- Travel Awardee, Howard Hughes Medical Institute, Janelia Research Campus** *Spring 2023*
- Semifinalist, SMART Scholarship, U.S. Department of Defense** *Spring 2023*
- Gruber Fellow, Yale University Gruber Foundation** *2021-2026*
- Outstanding Scholar in Biology, Mississippi Valley State University** *Spring 2021*
- Selected Participant, Women+ of Color Project, Harvard University** *Fall 2020*
- 2nd Place, Mississippi Academy of Sciences, Cellular, Molecular, and Developmental Biology Division** *Spring 2020*
- Travel Awardee, Emerging Researchers National Conference** *Spring 2020*
- 1st Place, Research Day, STEM Division, Mississippi Valley State University** *Spring 2019*
- Distinguished Scholar, Mississippi Valley State University** *Spring-Fall 2018*
- President's Honor List, Mississippi Valley State University** *Spring 2018*

Service and Volunteer Experience

- Panelist, Personal Statement Information Session for Underserved Students, Yale Gruber Foundation** *Spring 2024*
- Reviewer, International Journal of High School Research** *Fall 2023*
- Volunteer, Downtown Evening Soup Kitchen** *Fall 2023*
- Panelist, Yale Gruber Foundation** *Spring 2023*
- Organizer, Yale Interdepartmental Neuroscience Program Student Research Talks** *2022-2023*
- Transcriptionist and Research Request Network Volunteer, Yale Prison Education Initiative** *2022-Present*
- Ad Hoc Reviewer, Neuroscience Letters** *Fall 2022*

Reviewer, Yale Program to Advance Training in Health and Sciences (PATHS)	<i>2021-2023</i>
Lead Volunteer, ARTE Family Science Workshop	<i>Fall 2021</i>
Volunteer, Yale URM Preview Day	<i>Summer 2021</i>
Volunteer, Yale Open Labs	<i>Fall 2021</i>
Panelist, Women+ of Color Project, Harvard University	<i>Fall 2020</i>

Professional Affiliations

Medical Science Liaison Society	<i>2025-Present</i>
A global professional association supporting medical science liaisons through education, career development, networking, and industry resources.	
Edward A. Bouchet Graduate Honor Society	<i>2025-Present</i>
A national honor society recognizing doctoral scholars committed to academic excellence, leadership, diversity, and service in higher education.	
Delta Alpha Pi International Honor Society	<i>2023-Present</i>
An international honor society recognizing students with disabilities and advancing scholarship, leadership, advocacy, and disability awareness.	
Society for Neuroscience	<i>2023-Present</i>
A global scientific society advancing research, education, collaboration, and public understanding of the brain and nervous system.	
Molecular Psychiatry Association	<i>2023-Present</i>
A professional organization promoting research and collaboration on the molecular and biological mechanisms underlying psychiatric disorders.	
Yale Graduate Student Consulting Club	<i>2023-Present</i>
A student organization providing consulting education, case practice, professional development, and networking opportunities for Yale graduate students.	
Yale Club of New York City	<i>2015-Present</i>
A private alumni club offering professional, educational, cultural, dining, and social programming for the Yale alumni community.	
Yale Prison Education Initiative	<i>2021-Present</i>
A Yale program expanding access to rigorous, for-credit college courses and educational programming for incarcerated students in Connecticut.	
Yale Student Science Diplomats	<i>2021-Present</i>
A student-led organization promoting science communication, public engagement, and evidence-based science policy.	
Yale BBS Diversity and Inclusion Collective	<i>2021-Present</i>
A student-led organization fostering diversity, equity, inclusion, and community within Yale Biological and Biomedical Sciences.	
Alpha Kappa Alpha Sorority, Inc.	<i>2021-Present</i>
A historically Black Greek-letter service organization dedicated to scholarship, leadership, sisterhood, and community service.	
American Aging Association	<i>2020-2022</i>
A scientific organization advancing research and education on the biology of aging, longevity, and age-related disease.	