

Miles T. Wiley B.S.

## CURRICULUM VITAE

### CONTACT INFORMATION

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**NAME:** Miles T. Wiley  
**CITIZENSHIP:** United States of America  
**ADDRESS:** Department of Drug Discovery & Development  
Harrison College of Pharmacy Auburn University  
720 S. Donahue Dr.  
Auburn University  
Email: [mtw0055@auburn.edu](mailto:mtw0055@auburn.edu)  
Website: [Miles Wiley | LinkedIn](#)

### EDUCATION

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2021 B.S. in Biology Pre-Health, Tuskegee University  
2021- Present Ph.D. in Pharmaceutical Sciences, Auburn University  
Major Emphasis: Pharmacology  
Mentors: Dr. Vishnu Suppiramaniam, Dr. Miranda Reed

### CURRENT RESEARCH INTERESTS

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- Drugs of Abuse
- Neuropharmacology
- Learning and Memory
- Neurodegeneration
- Data Science

### EMPLOYMENT

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2017- 2018 Data Analytics Intern  
Fidelity Investments Inc. Raleigh, NC  
Skills & Responsibilities:

- 12-week Internships in the Summers of 2017 and 2018 working on the platform technologies team
- Analyzed investing trends and new technologies for the firm
- Updated one of the firm's websites and improved the UI

2020 Oncology Researcher  
Tuskegee University Tuskegee, AL  
Supervisor: Dr. Jessie Jaynes  
Skills & Responsibilities:

- Analyzed proteins for biomarkers and analyzed streptococcus erysipelas for therapeutic application
- Assisted in developing a novel therapeutic to treat sarcoma via immunotherapy

2020 Research Collaborator, Drug Discovery & Development  
Supervisor: Dr. Amit Mitra  
Harrison College of Pharmacy Auburn, AL  
Auburn University  
Skills & Responsibilities:

- Maintained Multiple Myeloma Cell lines

- Analyzed proteins for biomarkers to find a drug target and identify drugs for repurposing using a novel algorithm
  - Run qPCR for COVID-19 Sample Saliva Testing
- 2021      Biologics MAKE Clinical Supply Chain Intern  
Supervisor: Giuseppe Gaudio, Director of Platform Biologics  
Janssen R&D (Johnson and Johnson Family of Companies) Virtual due to Covid-19  
Skills & Responsibilities
- 12-week Internship working with the platform biologics team in Drug Product Drug Substance (DPDS)
  - Produced and delivered monoclonal antibodies for clinical studies in Janssen R&D
  - Point of contact for material and supplier-related issues at CMOs (Contract Manufacturing Organizations) to scale up and scale down drugs for clinical studies at Janssen R&D
  - Developed a Technology Transfer Document for an Alzheimer's drug product and drug substance
  - Tracked multiple metrics to evaluate performance and areas for improvement to decrease costs as well as time to market
- 2022      Neuroscience External Innovation Intern  
Supervisor: Dr. Eleni Stavridi, Senior Director of Neuroscience External Innovation  
Johnson & Johnson Innovation (Johnson and Johnson Family of Companies) Cambridge, MA  
Skills and Responsibilities
- 12-week internship working with the Neuroscience External Innovation Team
  - Due diligence of discovery, preclinical, and clinical therapeutics, and technologies in neurodegenerative diseases
  - Explore regulatory and market analysis
  - Investigate emerging biotechnologies using public data sources (e.g. Cortellis, Pitchbook, Citeline, Crunchbase)
  - Create and defend an investment thesis
- 2021-25      Ph.D. Candidate, Drug Discovery & Development  
Mentors: Dr. Vishnu Suppiramaniam, Dr. Miranda Reed, Dr. Subhrajit Bhattacharya  
Harrison College of Pharmacy Auburn, AL  
Auburn University  
Skills & Responsibilities:
- Experimental Design of electrophysiological, behavioral, and molecular experiments
  - Extracellular Field Recordings
  - Single-Channel Recording (Synaptosomal)
  - Western blotting chemiluminescence and fluorescence multiplexing
  - Behavioral Testing MWM, EPM, OFT, TFC
  - General Animal Care
  - Biochemical Isolation of Synaptosomes
  - Preparation of IACUC protocols and general laboratory SOPs
  - Mentorship of Undergraduates and new Graduate Students

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- 2024- Present Graduate Teaching Assistant, Harrison College of Pharmacy  
Supervisor: Dr. Anna Solomon  
Harrison College of Pharmacy  
Auburn University  
Skills & Responsibilities:  
  - Assist with grading practice-ready third-year PharmD candidates
  - Proctoring exams for third-year PharmD candidates
- 2024- Present Project Manager  
Supervisor: Rachele Ryan, Director of Partnerships  
Supervisor: Dr. Mohammad Ali Amini, Co-Founder & CEO  
Lab Central, QurCan Therapeutics  
Skills & Responsibilities  
  - Scheduling mentoring meetings with the startup and mentors
  - Assist the startup in preparing an agenda and/or presentation for each meeting
  - Assist the startup during the meeting with time management and note-taking
  - Disseminate all meeting notes to the mentor team and assist startup with follow-up action items
  - Created a non-confidential Pitch deck for Series A financing
- 2024- Present High Potential Entrepreneurs' Fellowship  
Supervisor: Dr. Julie Coleman, Executive Director  
Celdara Medical  
Skills & Responsibilities  
  - 1-year internship performing due diligence, competitive analysis, regulatory considerations, intellectual property, and analytical marketing for assets of interest
  - Focused on Alzheimer's therapeutics and technologies

## **RESEARCH**

### **DESCRIPTION OF SCHOLARLY PROGRAM**

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The **overall goal** of Mr. Wiley's research is to understand the underlying neurochemical and synaptic alterations associated with learning and memory deficits to identify therapeutic biomarkers. In particular, Mr. Wiley is interested in how alterations in synapses, glutamatergic, and GABAergic signaling can result in learning and memory deficits, as well as neurodegeneration.

**Long-term consequences of prenatal exposure to drugs** Mr. Wiley has begun investigating the long-term effects of prenatal cannabinoid exposure (PCE) mentored by Drs. Reed and Suppiramaniam. This line of work has received national and international attention as the use of cannabis has increased dramatically, even among pregnant women, with increased legalization. Yet, there is a relative lack of research on the long-term consequences of prenatal exposure. We use a multidisciplinary approach including behavioral, electrochemical, electrophysiological, cellular, and molecular methodologies to test our hypotheses that PCE

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alters the excitatory-inhibitory balance in the hippocampus resulting in deficits in synaptic plasticity leading to memory deficits.

## FUNDING

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2021- 2024 NIDA R01 Diversity Supplement Award \$191,516  
*Elucidation of Molecular Mechanisms of Prenatal Cannabinoid Exposure: Identification of Targets and Therapies*

The primary goal of this project is to dissect the molecular mechanisms by which prenatal cannabinoid exposure induces synaptic plasticity and cognitive deficits. Mr. Wiley's project utilizes a rodent model to examine the effects of prenatal cannabinoid exposure.

MPI: Dr. Vishnu Suppiramaniam, Dr. Miranda Reed, and Dr. Subhrajit Bhattacharya

❖ Awarded but declined in favor of G-RISE Fellowship

2021-Present National GEM Consortium Fellowship \$100,000  
Competitive fellowship awarded by the National GEM Consortium to support underrepresented students in STEM and matches minorities with GEM employer members based on specific skills and technical needs. Employer: Janssen Pharmaceuticals (Johnson & Johnson Family of Companies)

2021- 2024 Auburn Presidential Graduate Fellowship \$45,000

2021- 2024 NIH-NIGMS Graduate Research Training Initiative for Student Enhancement (G-RISE) Fellowship (Project Number: 5T32GM141739-03) (T32 Award) \$77,499

Highly competitive grant to broaden the participation in the biomedical sciences for traditionally underrepresented students. Mr. Wiley receives mentorship and professional development in diversity, equity, and inclusion.

MPI: Drs. Bruce Smith, Taffye Benson Clayton, and Melody Russell

## Grants Submitted

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2024 NIDA F31-Diversity The role of GABA in mediating memory deficits caused by prenatal cannabinoid exposure (Project Number: 1F31DA061632-01) (pending review)  
Role: MPI

2024 AFPE Fellowship The role of GABA in mediating memory deficits caused by prenatal cannabinoid exposure (Denied)  
Role: MPI

## Responsibilities Performed in Dr. Reed-Dr. Suppiramaniam Lab

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2021 Presented at a Tuskegee University seminar to recruit minority undergraduate students to pursue PhDs in biomedical sciences

2023 Judge for Auburn Graduate School Research Symposium

2023 Attended Tuskegee University career fair to recruit minority students to pursue biomedical PhDs

2023 Alabama State University-Auburn University Partnership to Promote Diversity in Aging Research R25 Coordinator

Project Number: 1R25AG070244-01A1

- Mentorship of 10 minority undergraduate students for a 10-week internship

- Coordinated housing, dining, and relocation for each intern and served as a liaison between Auburn University and Alabama State University

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- Independently planned and executed an Auburn-ASU Research Day where each intern presented a poster about the research they conducted in front of judges, Deans of Graduate school, Harrison College of Pharmacy, the Office of Inclusion and Diversity, and university faculty and staff

2024 Judge for Auburn Graduate School Research Symposium

### **Awards for students under my (co) supervision**

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1. **Auburn 2022-present (as a Ph.D. Student)**
  - a. College Award for Poster Presentation in Harrison College of Pharmacy, Tia Daniels- Undergraduate Student \*\*
  - b. Best Overall Poster, Auburn-Alabama State University Research Day 2023, Charlia Hardy- Undergraduate Student\*\*
  - c. Second Best Overall Poster, Auburn-Alabama State University Research Day 2023, Latasia Fleming- Undergraduate Student \*\*

### **TRAINING WORKSHOPS ATTENDED**

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1. Best Practices for Research Excellence Workshop, December 2021
2. Frontiers in Addiction Research and Pregnancy at Magee-Women's Research Institute (Virtual due to Covid-19), January 2022
3. NIH Responsible Conduct of Research Training, 2022
4. Graduate Fellowships and Responsible Conduct: An Interactive Workshop (RCR) Training, 2024

### **CONFERENCES ATTENDED**

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2021- 2022 National GEM Consortium Annual Conference  
2022 Winter Conference on Brain Research  
2024 Winter Conference on Brain Research  
2024 Biotechnology Innovation Organization (BIO) International Convention, San Deigo, CA

### **Publications**

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Cells- Kawsar U. Chowdhury, Maddison Holden, **Miles T. Wiley**, Vishnu Suppiramaniam, and Miranda N. Reed, (2024) *Effect of cannabis on glutamatergic neurotransmission: The interplay between cannabinoids and glutamate*

Frontiers in Neuroscience- **Miles T. Wiley**, Chu Zhang, Warren Smith, Kawsar Chowdhury, Vishnu Suppiramaniam, and Miranda N. Reed, (2024) *Prenatal Cannabinoid Exposure leads to early developmental alterations and adolescent behavioral alterations* (submitted under review)

MDPI- **Miles T. Wiley**, Hayden Northcutt, Kawsar Chowdhury, Vishnu Suppiramaniam, Miranda N. Reed, (2024) *Effect of cannabis on pre and post-synaptic GABAergic neurotransmission* (submitted under review)

Journal of Biochemistry- **Miles T. Wiley**, Vishnu Suppiramaniam, Miranda N. Reed, (2024) *The role of GABAergic excitability in excitation/inhibition balance* (submitted under review)

JBC- Warren D. Smith, Priyanka D. Pinky, Jenna Bloemer, Sharay E. Setti, **Miles T. Wiley**, Alexander Dityatev, Subhrajit Bhattacharya, Vishnu Suppiramaniam and Miranda N. Reed (2024) *Prenatal cannabinoid exposure alters excitation-inhibition balance through NMDAR-mediated signaling* (submitted under review)

**1<sup>st</sup> Author Abstract Accepted**

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Winter Conference on Brain Research- **Miles T. Wiley**, Warren D. Smith, Kawsar U. Chowdhury, Subhrajit Bhattacharya, Miranda N. Reed, Vishnu Suppiramaniam, (2024) *Prenatal Cannabinoid Exposure Leads to enhanced GABAergic Signaling Resulting in Learning and Memory Deficits in Adolescent Rat Offspring*

### **1<sup>st</sup> Author Presentations**

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**Miles T. Wiley**, Warren D. Smith, Kawsar U. Chowdhury, Subhrajit Bhattacharya, Miranda N. Reed, Vishnu Suppiramaniam, (2021) *Prenatal Cannabinoid Exposure Leads to enhanced GABAergic Signaling Resulting in Learning and Memory Deficits in Adolescent Rat Offspring* Harrison College of Pharmacy Research Symposium, Auburn AL (**Poster Presentation**)

**Miles T. Wiley**, Warren D. Smith, Kawsar U. Chowdhury, Subhrajit Bhattacharya, Miranda N. Reed, Vishnu Suppiramaniam, (2022) *Prenatal Cannabinoid Exposure Leads to enhanced GABAergic Signaling Resulting in Learning and Memory Deficits in Adolescent Rat Offspring* Graduate Education for Minorities Conference, Phoenix, AZ (**Poster Presentation**)

**Miles T. Wiley**, Eleni Stavridi (2022) *External Landscape of Amyotrophic Lateral Sclerosis and Frontotemporal Dementia Therapeutics and Technologies with Disease Modifying Potential* Graduate Education for Minorities Conference, Phoenix, AZ (**Oral Presentation**)

**Miles T. Wiley**, Warren D. Smith, Kawsar U. Chowdhury, Subhrajit Bhattacharya, Miranda N. Reed, Vishnu Suppiramaniam, (2022) *Prenatal Cannabinoid Exposure Leads to enhanced GABAergic Signaling Resulting in Learning and Memory Deficits in Adolescent Rat Offspring* NIH Diversity Supplement Trainee Professional Development & Networking Workshop (**Poster Presentation**)

**Miles T. Wiley**, Warren D. Smith, Kawsar U. Chowdhury, Subhrajit Bhattacharya, Vishnu Suppiramaniam, Miranda N. Reed (2023) *Prenatal Cannabinoid Exposure Leads to enhanced GABAergic Signaling Resulting in Learning and Memory Deficits in Adolescent Rat Offspring* NIH Diversity Supplement Trainee Professional Development & Networking Workshop (**Poster Presentation**)

**Miles T. Wiley**, Warren D. Smith, Kawsar U. Chowdhury, Subhrajit Bhattacharya, Vishnu Suppiramaniam, Miranda N. Reed (2024) *Prenatal Cannabinoid Exposure Leads to enhanced GABAergic Signaling Resulting in Learning and Memory Deficits in Adolescent Rat Offspring* Winter Conference on Brain Research (**Poster Presentation**)

**Miles T. Wiley**, Warren D. Smith, Kawsar U. Chowdhury, Subhrajit Bhattacharya, Vishnu Suppiramaniam, Miranda N. Reed (2024) *Prenatal Cannabinoid Exposure Leads to enhanced GABAergic Signaling Resulting in Learning and Memory Deficits in Adolescent Rat Offspring* Auburn University Graduate Research Symposium (**Oral Presentation**)

### **Other Presentations**

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Tia Daniels\*\*, **Miles T. Wiley**, Emma Redmon, Priyanka D. Pinky, Jenna Bloemer, Warren D. Smith, Jeremiah C. Pfitzer, Kawsar Chowdhry, Subhrajit Bhattacharya, Vishnu Suppiramaniam, Miranda N. Reed (2023) *Prenatal cannabinoid exposure (PCE) elicits memory deficits associated with reduced PSA-NCAM expression* American Heart Association HBCU Scholars Program (**Poster Presentation**)

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Charlia E. Hardy\*\*, Miles T. Wiley, Warren D. Smith, Kawsar U. Chowdhury, Jeremiah C. Pfitzer, Subhrajit Bhattacharya, Vishnu Suppiramaniam, Miranda N. Reed (2023) *Prenatal Cannabinoid Exposure Creates a Deficit in Learning and Memory* Auburn-ASU Research Day (**Poster Presentation**)

La'Tasia D. Fleming\*\*, Miles T. Wiley, Warren D. Smith, Kawsar U. Chowdhury, Jeremiah C. Pfitzer, Subhrajit Bhattacharya, Vishnu Suppiramaniam, Miranda N. Reed (2023) *Prenatal Cannabinoid Exposure Causes Deficits in PSA-NCAM* Auburn-ASU Research Day (**Poster Presentation**)

Katelyn D. Baxter\*\*, Miles T. Wiley, Warren D. Smith, Kawsar U. Chowdhury, Jeremiah C. Pfitzer, Subhrajit Bhattacharya, Vishnu Suppiramaniam, Miranda N. Reed (2023) *Prenatal Cannabinoid Exposure Causes Deficits in PSA-NCAM* Auburn-ASU Research Day (**Poster Presentation**)

Jordan P. Jenkins\*\*, Miles T. Wiley, Warren D. Smith, Kawsar U. Chowdhury, Jeremiah C. Pfitzer, Subhrajit Bhattacharya, Vishnu Suppiramaniam, Miranda N. Reed (2023) *Microelectrode Array* Auburn-ASU Research Day (**Poster Presentation**)

Adrian H. Courville, Miles T. Wiley, Emma K. Redmon, Tia N. Daniels, Kawsar U. Chowdhury, Vishnu Suppiramaniam, Miranda N. Reed (2024) *Prenatal Cannabinoid Exposure: Emerging Evidence of Medial Prefrontal Cortex Abnormalities* Winter Conference on Brain Research (**Poster Presentation**)

Katie Moerschel\*\*, Miles T. Wiley, Kawsar Choudhury, Miranda N. Reed, Vishnu Suppiramaniam (2024) *Prenatal Cannabinoid Exposure Affects memory Through Alterations in Glutamatergic Receptor Expression* Winter Conference on Brain Research (**Poster Presentation**)

Kawsar Chowdhury, Priyanka D. Pinky, Warren D. Smith, Miles T. Wiley, Subhrajit Bhattacharya, Miranda N. Reed, Vishnu Suppiramaniam (2024) *Prenatal Cannabinoid Exposure Affects Memory Through Alterations in Glutamatergic Receptor Expression and Function in the Hippocampus* Winter Conference on Brain Research (**Oral and Poster Presentation**)

Iva Durdanovic, Kawsar U. Chowdhury, Miles T. Wiley, Adrian C. Courville, Emma Redmon, Vishnu Suppiramaniam, Miranda N. Reed (2024) *Doxorubicin-induced cognitive impairment and synaptic plasticity* Winter Conference on Brain Research (**Poster Presentation**)

**Undergraduate students under my direction are noted with “ \*\* ”**

## **LEADERSHIP**

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2017-2018	Tuskegee MAPS (Minority Association Pre-Health Students) Senator
2018	Student Government Association Senator at Large
2019- 2021	Kappa Alpha Psi Southern Province Strategus and Treasurer
2020 -Present	Executive board member for the Alumni Association of Tuskegee University (national alumni association)
2021- Present	Department of Drug Discovery and Development Website Committee Member
2023- Present	Graduate Programs Committee Member, Auburn University, Harrison College of Pharmacy
2023- Present	Dean's Task Force on Student Recruitment

## **AWARDS and HONORS**

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2015	Eagle Scout- Three palms: Bronze, Gold, Silver
2017	National Academy of Future Scientists and Technologist Award Excellence
2017	L.M. Ludwick and M.C. Datta Memorial Award
2018	Raleigh Durham Tuskegee Alumni Club Scholarship Recipient

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2019            Kappa Alpha Psi Fraternity Incorporated  
2024            Scientist Mentoring & Diversity Program (SMDP) Fellow  
2024            Summer Program in Neuroscience, Excellence, and Success (SPINES)

### **EXTRACURRICULAR and Outreach**

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2021- Present   Auburn University BGPSA Member (Black Graduate and Professional Students Association)  
2021- Present   American Association of Pharmaceutical Scientists  
2017-2021       Tuskegee American Chemical Society Member  
2017-2021       National Society of Leadership and Success Member (NSLS)  
2024 – Present   Biotech Connection Bay Area (BCBA), Vice President, DE&I  
2024 – Present   Nucleate (Atlanta chapter), executive leadership team  
2024 – Present   Harvard Biotech Club Member

### **REFERENCES**

Current Mentor: Miranda Reed, M.S., Ph.D.  
Co-Director of Center of Neuroscience Initiative (CNSi)  
Professor  
Jack Clift Fellow  
Harrison College of Pharmacy  
Auburn University  
Mailing Address:  
720 S. Donahue Drive  
Auburn, AL 36830  
Email: [reedmir@auburn.edu](mailto:reedmir@auburn.edu)  
Phone: 334-844-7401

Current Mentor: Vishnu Suppiramaniam D.V.M., Ph.D.  
Co-Director of Center of Neuroscience Initiative (CNSi)  
Interim Dean of the College of Science and Mathematics at Kennesaw State University  
Associate Dean for Research and Graduate Studies and Professor of Biology  
Emeritus Professor  
Gilliland Professor  
Jack Clift Fellow  
Harrison College of Pharmacy  
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