

TyAnn M. McHenry, B.S.

Virginia Commonwealth University
Department of Chemistry
1001 West Main Street
Richmond, VA 23284

EDUCATION

- 2023-2028 **PhD in Organic Chemistry** (Advisor: Joshua D. Sieber)
Virginia Commonwealth University (VCU), Richmond, VA
- 2018-2022 **B.S. in Chemistry**, Magna Cum Laude, Cumulative GPA: 3.7
Alcorn State University, Lorman, MS

PROFESSIONAL EXPERIENCE

- 2024- Present **Graduate Research Assistant**, VCU, Richmond VA
- Designing copper-mediated methodologies for the enantioselective synthesis of chiral diamines from ubiquitous amides, with a focus on scalability and sustainability.
 - Exploring mechanistic pathways of amide transformations to identify novel reaction intermediates and improve stereochemical outcomes
 - Investigating reaction mechanisms to identify key intermediates and optimize asymmetric catalysis.
 - Refining experimental conditions to enhance reaction reproducibility and efficiency.
 - Apply advanced analytical techniques (e.g., NMR spectroscopy, HPLC) to characterize and verify the stereochemistry and purity of synthesized compounds
- 2023-Present **Organic Chemistry Lab Teaching Assistant (TA)**, VCU, Richmond VA
- Instructed students in organic chemistry laboratory techniques, including recrystallization, distillation, chromatography, and spectroscopy (e.g., IR, NMR).
 - Ensured proper safety protocols and emphasized the practical application of theoretical concepts to foster hands-on learning and technical proficiency.
 - Facilitated improved student proficiency in organic laboratory techniques through structured mentorship
- 2023 **Manufacturing Chemist I**, Sterling Pharma Solutions, Milwaukee, WI
- Operated complex reactor systems and ancillary equipment across three production units, optimizing performance for multi-step syntheses in the manufacturing of Active Pharmaceutical Ingredients (APIs)
 - Used the Allen-Bradley Control System to control process operations.
 - Performed chemical reactions on multi-kilogram scale with 95% yield.
 - Documented results and procedures in 100% of production runs, ensuring accurate records for audits and process reproducibility.

- 2020- Present **Services (3F151) Journeyman**, United States Airforce National Guard
- Contributed to various missions, supporting logistical and service-based operations within the National Guard.
 - Collaborated with cross-functional teams during contingency operations, demonstrating adaptability and strong communication skills in dynamic environments.

HONORS, AWARDS

- 2022-2023 **Air and Space Achievement Medal**, United States Airforce
- Recognized for exceptional service as Lodging Apprentice at Ali Al Salem Air Base
 - Oversaw a \$21M lodging operation, 97 facilities, and 3,900 bed spaces in support of Operations *SPARTAN SHIELD* and *INHERENT RESOLVE*.
 - Modernized senior leader quarters, installing \$35K in new furniture and improving quality of life for 23 members.
 - Identified security flaws, protecting personal identifiable information for 124 users.

MEMBERSHIPS

- 2024–Present **Secretary**, American Chemical Society (ACS), Women’s Chemists’ Committee (WCC)
- 2023–2024 **Vice President**, Chemistry Graduate Students Organization
- 2023- Present Black Graduate Student Organization
- 2023-Present ACS, Younger Chemists Committee (YCC)
- 2021- Present Alpha Chi Sigma Fraternity Incorporated
- 2020-Present Sigma Gamma Rho Sorority, Incorporated

SKILLS

Technical Skills

- Proficient in organic synthesis, NMR, HPLC, Glovebox handling, and troubleshooting experimental procedures.
- Skilled in optimizing chemical reactions and using data analysis software (e.g., ChemDraw, SciFinder) for molecular design and result interpretation.

Military Skills

- Led logistics and resource allocation for high-priority operations, ensuring timely delivery under strict deadlines.
- Managed compliance with operational standards, safety protocols, and regulatory requirements, safeguarding personnel and assets.
- Directed and trained cross-functional teams, ensuring efficient mission execution in high-pressure environments.