

Madeline Wiseman

New York, NY | (719) 482 8018 | mrw2198@columbia.edu

Education

Columbia University, Columbia College, New York, NY

Expected May 2026

Bachelor of Arts in Biology

GPA: 3.59

Relevant Coursework: Cell Biology, Biochemistry, Organic Chemistry I and II with Labs, Medical Spanish, Immunology, Biology I and II with Lab, Statistics, Seminar in Biological Research, Anatomy and Psychology.

Pikes Peak State College, Colorado Springs, CO

May 2022

Associate of General Studies | Magna Cum Laude

GPA: 3.84

(Completed while in high school)

Relevant Coursework: Advanced Human Anatomy, Anatomy and Physiology I and II with Labs.

Honors, Awards and Scholarships

2022 – 2024 Alan Gornick Scholarship, Columbia University. Received Twice.

2022 – 2026 Daniels Scholar. Scholarship based in the Mountain West for students based on character, leadership and commitment to serving their communities.

Professional Experience

Columbia University, Greenwald Lab

New York, NY

Research Assistant, Principal Investigator: Iva Greenwald Ph.D.

May 2024 – Aug. 2024

- Worked full-time with a postdoctoral mentor on a project studying cell differentiation in *C. elegans* mutants including genetic crossing, data collection, and PCR.
- Drafted a paper on my summer project in the style of an academic publication.

NYU Grossman School of Medicine, Rice Lab

New York, NY

Research Assistant, Principal Investigator: Margaret Rice Ph.D.

June 2023 – May 2024

- Full-time during the summer and then part time. Collaborated on experiments to understand the functionality of GABA_A receptors on dopamine axons to discover the basic mechanisms underlying many neurodegenerative disorders.
- Planned and conducted experiments in immunohistochemistry and independently collected data through confocal microscopy, including independently problem-solving numerous software and data collection challenges.
- Assisted with perfusions and other procedures. Prepared, stained and mounted tissue.
- Interacted with the medical community through lectures on neurology and research.

NYU Langone Health, BRAIN Neurology Program

New York, NY

Research Student, Principal Investigator: Mia Minen M.D. Ph.D.

May 2023 – May 2024

- Ten week intensive neurology program that continued into the school year. Wrote reflections on more than fifty attended lectures including grand rounds and research presentation as part of the program's curriculum research.
- Collaborated with peers to draft a research proposal, abstract and paper on the topic of neurology pathway education and potential curricula through easily accessible media for college aged students.

Columbia University, Jia Lab

New York, NY

Laboratory Assistant, Principal Investigator: Songtao Jia Ph.D.

Feb. 2023 – May 2023

- Independently prepared mediums and plates for the growth of cell colonies to study the organization of genomic DNA.

Pikes Peak State College

Colorado Springs, CO

Cadaver Preparation Team Member

Jan. 2022 – Mar. 2022

- Worked in a small team to anatomize a cadaver for the Anatomy and Physiology I and II classes.
- Emphasized technical procedures and the use of extensive medical instrumentation.

Publications

Jyoti Patel, Ang Sherpa, Riccardo Melani, Paul Witkovsky, **Madeline Wiseman**, Brian O'Neill, Chiye Aoki, Nicolas Tritsch and Margaret Rice. (2023) GABA co-released from striatal dopamine axons dampens phasic dopamine release through autoregulatory GABA_A receptors. *Cell Reports*. *Volume 43, Issue 3*, 26 March 2024, 113834. doi.org/10.1016/j.celrep.2024.113834

Abstracts and Presentations

Wiseman, M., Ketcham, A., Greenwald, I. (2025) DAF-18/PTEN's Role in Maintaining Vulval Precursor Cell Quiescence in *C. elegans* During Dauer. Summer Undergraduate Research Fellowship Symposium; 2025 Mar. 29; Columbia University.

Mahmood, N., Tong, S., Aamer, A., Kaur, A., Khan, F., Medina, J., **Wiseman, M.**, Kim, B., Minen, M. (2024) Engaging Minds: Leveraging Asynchronous Learning with Books and Movies to Cultivate Enthusiasm for Neurology Among College Students. American Academy of Neurology Annual Meeting, April 2024; Denver, CO. *Neurology* 102 (17 Supplement 1), doi.org/10.1212/WNL.0000000000205733

Wiseman, M., Patel, J. C., Witkovsky, P., Rice, M. E. (2024) Anatomical evidence for GABA-A receptors on dopamine axons for autoregulation of striatal dopamine release by co-released GABA. American Academy of Neurology Annual Meeting, April 2024; Denver, CO. *Neurology* 102 (17 Supplement 1), doi.org/10.1212/WNL.0000000000206194

Wiseman, M., Patel, J. C., Witkovsky, P., Rice, M. E. (2023) Autoregulation of Striatal Dopamine Release by Co-released GABA: Anatomical Evidence for GABA_A Receptors on Dopamine Axons. Columbia Undergraduate Research Symposium; 2023 Oct. 13; Columbia University, New York, NY.

Clinical Experience

NYU Tisch Hospital, PAVERS Program New York, NY
Patient Advocate and Clinical Research Volunteer Jan. 2025 – Present

- An 8 hour shift weekly, working with physicians, nurses, and social workers to provide non-medical resources for patients struggling with shelter, food or safety through screeners. Speaking with, and listening to, patients and finding ways to make a difficult time in patients lives easier, and connecting them with information.

Columbia Irvine Medical Center New York, NY
Clinical Shadowing Aug. 2024 – Dec. 2024

- Learning about personal connection with patients and the practice of medicine in an under-served patient population.

Leadership and Community Engagement

Columbia Catholic Ministry New York, NY
Co-President Dec. 2024 – Present

- Organized one of the largest religious student organizations on campus, uniting a 16 member student board to run multiple weekly events. Focusing on communication between previously siloed groups within the ministry and interreligious dialogue with other student-led religious initiatives on campus.

Interreligious Chair Dec. 2023 – Dec. 2024

- Collaborating with other religious organizations on campus to foster respectful dialogue and to foster constructive conversations to allow students to share their values and build friendships.

Retreat Co-chair Dec. 2022 – Dec. 2023

- Working in a small team to organize major off-campus semesterly retreats for around 40 students.

Missionaries of Charity May 2025 – Present

- A weekly volunteer at a soup kitchen to serve guests in West Harlem. It's been amazing to discover a world so different from my own despite close geographical proximity.

Undergraduate Debate Society Sept. 2022 – Present

- Engage in respectful parliamentary-style debate with peers, usually on philosophy as part of a professional society.
- Part of the presiding officer leadership board for the Fall 2024 semester, organizing debates and refining topic choices.

Passages Fellow March 2025

- Co-led a 10-day religious pilgrimage to the Holy Land in partnership with Columbia Catholic Ministry.
- Played a large role in advocating for a number of students who formerly served in the armed forces and were struggling with PTSD symptoms because of the unexpected political and militaristic speakers that were added to the programming.

Natural Womanhood

Oct. 2024 – Dec. 2024

- Led a group of a dozen students, undergraduate and graduate, at weekly meetings through a cycle mindfulness curriculum, sharing the scientific and physiological information behind hormonal cycles and fostering a community of friendship.

Reading Group

Summers 2024, 2025

- Organized a weekly reading group of usually 6-12 people to foster community over the summer for friends and interested students on contemporary and historical works with themes on the meaning of life, religion, and society.

Choir Leader and Sacred Music Cantor

Dec. 2020 – Dec. 2024

- Organizing a dozen students for weekly rehearsals and religious services since Sep. 2023.
- Leading the congregation in music as a solo cantor since Dec. 2020.

Professional Memberships and Activities

American Academy of Neurology Member (AAN)

June 2023 – Present

- Attended and presented a poster at the Spring 2024 conference in Denver. Participated in two medical student workshops to explore specific areas of neurology. Virtually attended Autoimmune Neurology Summer 2024 Conference.

American Physician Scientist Association (APSA)

Dec. 2022 – Aug. 2023

- Active in the undergraduate mentor-mentee program where I was paired with an M.D. Ph.D. trainee to help mentor me for a potential future career as a physician-scientist.

Other Positions and Employment

Pre-College Programs, Columbia University

New York, NY

Course Assistant

June 2025 – Aug. 2025

- Mentored a cohort of students in a laboratory course covering college level labs in general and organic chemistry.
- Constructed a lesson to the course curricula introducing technological chemistry tools: Avogadro and ChemDraw.
- Discovered both a love for teaching and the importance of synthesis in conveying knowledge.

Aquatic Center

Woodland Park, CO

Certified Lifeguard

Aug. 2021 – Aug. 2022

- Learned flexibility and team building skills and gained CPR and basic life support certification.

Sky High Girl Scout Camp

Summer Kitchen Staff

May 2019 – Aug. 2022

- Cultivated leadership and problem-solving skills in a high demand, small team environment.
- Trained new employees on procedures and organizational policies.
- Fostered conflict resolution and communication among other employees while maintaining a positive atmosphere.

Technical Skills

Microscopy: Confocal imaging, specializing in Fusion and Imaris software on the BC-43 Andor confocal. Imaging processing and analysis including video editing, z-stacks, and data collection especially in the striatum and midbrain regions.

Laboratory: Immunohistochemistry. Guided experimentation in both Chemistry and Biology, data interpretation, PCR, neuroanatomy, genetic research with *C. elegans*, and histological identification.

Languages

English: Native

Spanish: Intermediate (currently studying)

References

Margaret Rice, Professor

Departments of Neuroscience and Neurosurgery
NYU Grossman School of Medicine

margaret.rice@nyu.edu

Nathanael Shelley, Professor

Departments of Asian and Middle Eastern Cultures
Barnard College, Columbia University

nshelley@barnard.edu