

MEGAN P. DARRELL

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EDUCATION

- Albert Einstein College of Medicine (Bronx, NY)** *June 2022 – Expected 2030*
Medical Scientist Training Program, MD-PhD
- Wheaton College (Norton, MA)** *August 2017 – May 2020*
Bachelor of Arts, Magna Cum Laude
Bioinformatics Major, Chemistry Minor

CLINICAL EXPERIENCE

- MSTP Continuity Clinic (Bronx, NY)** *April 2025 – Present*
Clinical Trainee
- Coordinate patient care at weekly student-run outpatient clinic to continue developing clinical acumen during research years
 - Focus on history-taking, physical exams, patient presentations, laboratory testing, and treatment management.
- ECHO Clinic (Bronx, NY)** *September 2022 – October 2023*
Patient Advocate and Community Outreach
- Communicated directly with patients to facilitate interactions with medical professionals
 - Directed educational sessions to provide community outreach and tutoring for children at Bronx Public Schools
- The National Institutes of Health (Bethesda, MD)** *August 2020 – June 2022*
Patient Rounds
- Shadowed several physicians in NIAMS to observe patient rounds
 - Observed leading medical scientists at the George Washington Myositis Clinic, which includes physician consults for disease diagnostics and clinical trial testing
- Sturdy Memorial Hospital (Attleboro, MA)** *August 2019 – March 2020*
Emergency Room Patient Care Liaison
- Assisted patients and families in the ER and waiting area to provide care and comfort during a time of medical distress
 - Served as a liaison between patients and medical staff
- Connecticut Children's Medical Center (Hartford, CT)** *2019 – 2020*
Physician Shadowing
- Pediatric Hematology and Oncology (Michael Isakoff, MD) *March 2019, January 2020*
 - Behavioral Health Unit of the Emergency Room (Robert Sahl, MD) *January 2020*
 - Behavioral Health Transitions Clinic (Kashmeer Zablan, MD) *January 2020*

RESEARCH EXPERIENCE

- Cognitive Neurophysiology Lab (Bronx, NY)** *March 2024 – Present*
Thesis Research
- Processed and analyzed EEG data to elucidate endophenotypic changes in individuals with autism spectrum disorder
 - Utilized machine learning to identify autism subgroups and novel EEG biomarkers across multiple behavioral paradigms
- Mill Etienne Diversity and Inclusion Lab (New York Medical College)** *October 2022 – Present*
Statistical Analyst
- Collaborated with clinicians and students to perform statistical analyses (R) that assess health disparities in clinical trials
 - Projects include: A) meta-analyses that evaluate race and gender representation in clinical trials compared to population disease prevalence of: *amyotrophic lateral sclerosis, Alzheimer's disease, epilepsy, heart transplant, lung transplant, stroke, Parkinson's disease, fracture*; B) evaluation of race and gender disparities in medical training by specialty and sub-specialty
- Tim Duong MRI Lab (Bronx, NY)** *June 2022 – January 2024*
Research Rotation
- Performed biostatistical analyses to evaluate a longitudinal COVID-19 patient population compared to healthy controls (R), leading to the identification of novel findings regarding neurological and pulmonary dysfunction in COVID-19
- The National Institutes of Health (Bethesda, MD)** *August 2020 – June 2022*
Postbaccalaureate Researcher, Dr. Hanna Kim's Juvenile Dermatomyositis (JDM) Laboratory
- Performed bioinformatics and statistical analyses, including machine learning classification (Python)
 - Performed bulk and single cell RNA-sequencing analysis (Seurat, R) to better understand JDM pathogenesis and establish novel treatment based on varying levels of disease activity and myosin-specific autoantibody (MSA) classification
 - Wet-lab techniques: PBMC isolation, RNA isolation, flow cytometry, bulk and single-cell RNA sequencing

- Refined a neural network (Python) that can produce 2-dimensional pose estimation used for mouse tracking and gait analysis
- Applied the neural network to video data from Collaborative Cross F1 generations to analyze gait and social interaction patterns, establishing heritability across a panel of diverse mice
- Trained in mouse handling, high performance computing, and RStudio

PUBLICATIONS

[Google Scholar](#)

- Choi J, **Darrell M** et. al. (2025). Laser hair removal in patients with polycystic ovarian syndrome and darker skin: A case-control study. *Under review in Journal of the American Academy of Dermatology*. 2025, April. April 2025
- Wang B, Bashier M, Fagan M, **Darrell M**, Horan D, Mehraban Alvandi L, Horn W, Kahn M. (2025). The Implications of Language Barriers on Postoperative Outcomes Among Older Adults with Hip Fracture. *Under review in Journal of Orthopaedic Trauma*. 2025, March. March 2025
- Jain A, Vazquez M, **Darrell M**, Ogarro M, Salik I, Pisapia J. Gender Disparities in Neurosurgical Training: Evaluation of the Impact of Gender from Residency to Academic Leadership. (2024). *Under review in Journal of Neurosurgery*; 2024, December. December 2024
- Darrell M**, Williams DKA, Smith C, Faasumalie P, Jerome W, Murray K, Etienne M. (2024). Gender Disparities in Graduate Medical Education from 2012 to 2022: Creating a Pipeline Through the Glass Ceiling in Medicine. *Under review in Academic Medicine*, October 2024. October 2024
- Axler E, Lu A, **Darrell M**, Vielemeyer O, Lipner S. (2024). Surgical Site Infections Are Uncommon Following Nail Biopsies in a Single Center Case-Control Study of 502 Patients. *Journal of the American Academy of Dermatology*. <https://doi.org/10.1016/j.jaad.2024.05.017> May 2024
- Eligulashvili A*, **Darrell M***, Gordon M, Jerome W, Fiori K, Congdon S, Duong T. (2024). Patients with unmet social needs are at higher risks of developing severe long COVID-19 symptoms and neuropsychiatric sequela. *Science Reports*, 14. <https://doi.org/10.1038/s41598-024-58430-y> April 2024
- * equal contribution, co-first author
- Eligulashvili A*, **Darrell M***, Miller C, Lee J, Congdon S, Lee J, Hsu K, Yee J, Hou W, Islam M, Duong T. (2022). COVID-19 Patients in the COVID-19 Recovery and Engagement (CORE) Clinics in the Bronx. *MDPI*, 13 (1). <https://doi.org/10.3390/diagnostics13010119> December 2022
- * equal contribution, co-first author
- Sheppard K, Gardin J, Sabnis G, Peer A, **Darrell M**, Deats S, Geuther B, Lutz C, Kumar V. (2022). Stride-level analysis of mouse open field behavior using deep-learning-based pose estimation. *Cell Reports*, 38 (2). <https://doi.org/10.1016/j.celrep.2021.110231>. January 2022

SELECTED PRESENTATIONS & ABSTRACTS

[Google Scholar](#)

- Zajmi U, **Darrell M**, Chin A, de Jesus AA, Brooks S, Goldbach-Mansky R, Rider LG, Kim H. Top Peripheral Blood Transcriptomic Gene Modules Reveal Functional Annotation and Correlation with Clinical Traits in Juvenile Dermatomyositis (JDM) and Myositis-Specific Autoantibody (MSA) Groups. Poster Presentation at: American College of Rheumatology; 2024, November 18. Washington, DC. November 2024
- Kaneshiro A, Chin A, **Darrell M**, Biancotto A, Cheung F, Miller F, Rider L, Kim H. Broad Proteomic Analysis Reveals Top Differential Protein Modules and Functional Annotations with Clinical Traits in Juvenile Dermatomyositis (JDM) and Myositis-Specific Autoantibody (MSA) Groups. Poster Presentation at: American College of Rheumatology; 2024, November 18. Washington, DC. November 2024
- Darrell M**, Vanneau T, Cregin D, Lecaj T, Foxe J, Molholm S. 27- & 40-Hz Auditory Entrainment Delay in Children with Autism Spectrum Disorder. Poster Presentation at: Intellectual and Developmental Disabilities Research Center (IDDRC) Annual Leadership Meeting; 2024, October 10. Madison, WI. October 2024
- Darrell M**, Vanneau T, Cregin D, Lecaj T, Foxe J, Molholm S. 27- & 40-Hz Auditory Entrainment Delay in Children with Autism Spectrum Disorder. Poster Presentation at: Society for Neuroscience; 2024, October 5-9. Chicago, IL. October 2024
- You M, Dyce C, Vazquez M, **Darrell M**, Etienne M. Analysis of Disparities in Racial and Ethnic Diversity in the Pipeline to Neurology Fellowships from 2012-2022. Poster Presentation at: Annual Meeting of the American Neurological Association; 2024, September 14-17. Orlando, FL. September 2024
- Chao J, Parker-Fong K, Wang B, **Darrell M**, Horan D, Kahn M, Horn W. Comparison of 1-year mortality and in-hospital ambulation rates in English and Spanish speaking geriatric patients after hip fracture surgery. Poster Presentation at: American Orthopedic Association; 2024, June 18-22. St Louis, MO. June 2024

Olivera J, Hashmi M, Darrell M , Faith I, Colon S, Sapin A, Chopra A. Hypercoagulability in Obesity: Factor VIII Levels Improve after Weight Loss induced by Laparoscopic Sleeve Gastrectomy. Poster Presentation at: American Society for Metabolic and Bariatric Surgery.; 2024, June 11. San Diego, CA.	June 2024
Rao D, Brabant P, Chau I, Darrell M , Yao C, Roth M, Pandit M, Gary M, Etienne M. Racial Disparities Among Triple Negative Breast Cancer Clinical Trials Enrollees Between 2010 - 2023. Poster Presentation at: American Society of Clinical Oncology (ASCO); 2024, June 4. Chicago, IL.	June 2024
Olivera J, Ramesh R, Williams D, Darrell M , Pura-Bryant J, Hashmi M, John D, Forest S, Bush E, Kilic A, Etienne M. Disparities in Cardiothoracic Transplantation: A Metanalysis of Participant Demographics in US-Based Heart Transplant Clinical Trials. Poster Presentation at: Annual Meeting of the Society of Thoracic Surgeons; 2024, April 27-30. Toronto, Canada.	April 2024
Steinhart A, Vazquez M, Darrell M , Murray K, Etienne M. An Analysis of the Inverted Gender-Gap from OBGYN resident to OBGYN Department Chair. Poster Presentation at: 2024 Diversity in Medicine Conference; 2024, April 27. Ann Arbor, MI.	April 2024
Katz M, Barone N, Vazquez M, Darrell M , Etienne M. Gender Equity in Cardiac Subspecialty Fellowships, 2012-2022. Poster Presentation at: American College of Cardiology; 2024, April 6-8. Atlanta, GA.	April 2024
Darrell M , Williams D, Faasumalie P, Etienne M. Gender Disparities in Graduate Medical Education from 2012 to 2022: Patching the Holes in the Pipeline to Academic Medicine Leadership. Poster Presentation at: Einstein IMPACT Day; 2024, March 21. Bronx, NY.	March 2024
Peraza C, Ogarro M, Darrell M , Agrawal S, Lartigue S, Etienne M. Dissecting Diversity Trends Amongst General Surgery Residents. Poster Presentation at: BNGAP National Pre-Faculty Career Development Conference; 2023 October 14. New York, New York.	October 2023
Rakolle K, Darrell M , Etienne M. From Resident to Chair: Gender Disparities in Child Neurology Pipeline. Poster Presentation at: American Neurological Association; 2023 September 9-12. Philadelphia, PA.	September 2023
Darrell M , Chin A, Kim H. Peripheral Transcriptomic Analysis to Identify Key Differences in Juvenile Dermatomyositis (JDM) and Myositis-Specific Autoantibody (MSA) Groups. Poster Presentation at: Rheumatism Society of DC Fellows Forum. 2022 May 20. Washington, DC.	May 2022
Darrell M , Sheppard K, Kumar V. Using a deep learning neural network to analyze mouse gait and levels of social interaction. Oral Presentation at: Annual Biomedical Research Conference for Minority Students; 2019 Nov 13-16. Anaheim, CA.	November 2019

COMMUNITY SERVICE

Mount Eden Children's Academy Afterschool Program (Bronx, NY) <i>Bronx Soccer & Science Program, Founder & Volunteer Coach</i>	August 2023 – Present
<ul style="list-style-type: none"> Founded an afterschool program for children (grades K-5) to participate in structured sports and science experiments Formed collaboration with the Cognitive Neurophysiology Laboratory to involve students in scientific research 	
NICU Development (Bronx, NY) <i>NICU Cuddling Volunteer</i>	March 2023 – Present
<ul style="list-style-type: none"> Worked directly with infants in the NICU to provide human contact essential for sensory development 	
Project Sunshine (Washington, DC) <i>Washington, DC Chapter Leader</i>	August 2021 – May 2022
<ul style="list-style-type: none"> Organized Teleplay sessions for pediatric patients, providing clinical service in a safe, virtual setting Managed a large group of clinical volunteers, which includes volunteer on-boarding and leading practice sessions 	

TEACHING & MENTORSHIP

Polygence (Menlo Park, CA) <i>High School Research Mentor</i>	September 2023 – Present
<ul style="list-style-type: none"> Worked directly with high school students to facilitate and develop independent research projects as pre-college experience 	
Albert Einstein Anatomy & Physiology (Bronx, NY) <i>Chief Peer Assistant</i> <i>Peer Assistant</i>	July 2024 – Present May 2023 – July 2024
<ul style="list-style-type: none"> Collaborated with course directors to develop and lead tutoring sessions for Medical Anatomy & Physiology Directed and facilitated weekly small-group sessions to tutor first-year MSTP and MD students 	
Albert Einstein Anatomy & Physiology (Bronx, NY) <i>Teaching and Laboratory Assistant</i>	November 2022 – Present
<ul style="list-style-type: none"> Collaborated with curriculum directors to teach anatomy to first-year medical students in human cadaver laboratories 	

Prince George County Biomedical Mentorship Program (Washington, DC)*October 2020 – May 2022**Biomedical Mentor*

- Mentored two high school students pursuing a career in STEM; planned group sessions for college application advising

Wheaton College Varsity Women's Soccer (Norton, MA)*December 2018 – May 2020**Team Peer Advisor*

- Mentored and academically advised teammates through tutoring sessions and management of class schedules

YMCA Reach and Rise Program (Attleboro, MA)*November 2019 – April 2020**Youth Mentor*

- Served as a mentor to children within 5th – 8th grade in a therapeutic afterschool program that supports students suffering from PTSD and trauma related to adverse childhood experiences

Elizabeth Amen Nursery School (Norton, MA)*January 2018 – March 2020**Teaching Assistant*

- Worked as a personal aide to a child with behavioral challenges, monitoring safety and increasing his interpersonal skills
- Interacted with and taught students, while also monitoring safety and maintaining order in a 4-5 year old classroom

Wheaton College Chemistry Department (Norton, MA)*August 2018 – January 2020**General Chemistry and Organic Chemistry Laboratory Assistant*

- Collaborated with both general chemistry and organic chemistry professors to teach students laboratory techniques
- Managed set-up and clean-up, in addition to training students in the completion of laboratory tasks and benchwork

Wheaton Tutor Outreach Program (Norton, MA)*August 2017 – January 2018**Yelle Elementary School Tutor*

- Assisted 4th and 5th graders in an afterschool program to complete homework assignments

LEADERSHIP EXPERIENCE**MSTP Social Media & Outreach (Albert Einstein COM)***November 2022 – Present**Director*

- Coordinated official Instagram, Twitter, and TikTok accounts for the MSTP program at Albert Einstein

Artificial Intelligence in Medicine Club (Albert Einstein COM)*January 2023 – Present**Executive Board – Vice President of Programming*

- Responsible for organizing speaker panels and leading coding workshops for students and faculty

MSTP Recruitment Chair (Albert Einstein COM)*Senior Recruitment Chair**March 2024 – April 2025**Junior Recruitment Chair**March 2023 – March 2024*

- Organized and led recruitment events for prospective students, including interview panels and welcome events

Orthopedic Surgery Interest Group (Albert Einstein COM)*May 2023 – May 2024**Executive Board – Research Coordinator*

- Collaborated with Montefiore faculty to identify academic opportunities and research mentorship to current medical students

Pediatrics Interest Group (Albert Einstein COM)*January 2023 – March 2024**Executive Board – Jacobi Kids Coordinator*

- Led outreach events for pediatric patients at Jacobi Hospital, including founding a weekly socialization and play program

NCAA Student-Athlete Advisory Committee (Wheaton College)*February 2019 – May 2020**Wheaton Athletic Mentor Executive Board*

- Organized, served at, and fundraised for community events, in addition to serving as marketing and social media coordinator

Wheaton College Athletics (Wheaton College)*May 2019**Lyons Leadership Academy*

- Represented women's soccer at a week-long leadership academy, which included group collaboration activities to enhance peer leadership and interpersonal skills

WORK EXPERIENCE**Falk Recreation Center (Bronx, NY)***September 2022 – Present**Intramural Assistant*

- Responsible for greeting and check-in at the front desk, in addition to management of weekly intramural sports

Winged Foot Golf Club (Mamaroneck, NY)*May 2024 – August 2024**Server*

- Delivered exceptional customer service to high-profile members and guests by efficiently managing high-pressure environments, demonstrating strong multitasking abilities, and ensuring meticulous attention to detail

Summer House Santa Monica (Bethesda, MD)*September 2021 – April 2022**Server*

- Served at a modern California-inspired restaurant, where I worked directly with guests to ensure a positive dining experience

Lucky Lou's Bar and Grille (Wethersfield, CT)*May 2020 – August 2020**Server and Bartender*

- Served 40-50 hours per week; developed conflict resolution and interpersonal skills, enforced COVID-19 protocol

Wheaton College Admissions Ambassador (Norton, MA)*January 2018 – January 2020**Tour Guide and Information Session Panelist*

- Provided informational sessions and tours to prospective students

AWARDS AND ACCOLADES

Award of Excellence in Medical Education	<i>Einstein IMPact Day 2024</i>
Richard and Virginia Thornburgh Leadership Award	<i>2020</i>
Wheaton College May Fellows Honor Program	<i>Fall 2017 – Spring 2020</i>
Dean's List	<i>Fall 2017 – Spring 2020</i>
Candace Whiffen Dyal '76 Endowed Scholarship	<i>2018, 2019</i>
NEWMAC Academic All-Conference	<i>2018, 2019</i>
Charles A. Dana Scholarship	<i>2018</i>
Award for Excellence in Hispanic Studies	<i>2018</i>

GRANTS AND FELLOWSHIPS**Wheaton College**

Trustee Merit Scholarship	<i>2017 – 2020</i>
Porter Fellowship Fund	<i>2019</i>
Wagner Professional Development Funding	<i>2019</i>

National Institute of Neurological Diseases and Stroke

Summer Research Experience in Neurobiology (Federal grant #2R25NS078795-06A1)	<i>2019</i>
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RELEVANT SKILLS

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- Techniques:** Machine learning, high-performance computing, bulk and single cell RNA sequencing analysis, biostatistics, PBMC isolation, RNA isolation, mouse handling (restraint, sex determination, tail tip, ear notch, and CO₂ euthanasia), social media marketing, graphic design and fundraising
 - Applications:** Microsoft, RStudio, Python, C++, Adobe Photoshop, GIMP
 - Foreign Languages:** Conversational Spanish proficiency

REFERENCES**Sophie Molholm, PhD***Professor & Co-Director of Rose F. Kennedy Intellectual and Developmental Disabilities Research Center*

Department of Neuroscience | Albert Einstein College of Medicine, Bronx, NY

Email: sophie.molholm@einsteinmed.edu**Hanna Kim, MD, MS***Assistant Clinical Investigator*

Juvenile Myositis Therapeutic and Translational Studies Unit | NIAMS, Bethesda, MD

Email: hanna.kim@nih.gov**Vivek Kumar, PhD***Assistant Professor & Principal Investigator*

Genomics, Behavior and Addiction Research | The Jackson Laboratory, Bar Harbor, ME

Email: kumar.vivek@jax.org**Mark LeBlanc, PhD***Professor & Department Chair*

Department of Computer Science | Wheaton College, Norton, MA

Email: leblanc_mark@wheatoncollege.edu**Michael Kahn, PhD***Professor & Department Chair*

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