

# Amjad Samara, M.D.

Cleveland Clinic Foundation  
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## EDUCATION

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- Master of Science in Clinical Research** *July 2025 – present*  
Case Western Reserve University, Cleveland, OH
- MS/Neuroimmunology Fellow, PGY-5** *July 2025 – present*  
Cleveland Clinic Foundation, Cleveland, OH
- Neurology Resident Physician** *June 2021 – June 2025*  
Washington University/B-JH/SLCH Consortium, St Louis, MO
- M.D. - Doctor of Medicine** *August 2010 – May 2016*  
An-Najah National University, Nablus, Palestine  
Cumulative GPA = 3.60/4.00 (ranked 3/75).

## WORK EXPERIENCE

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- 1. **T32 Postdoctoral Research Scholar** *September 2018 – June 2021*  
Washington University in St. Louis, St. Louis, MO
- 2. **Postdoctoral Research Fellow** *November 2017 – August 2018*  
University of Arkansas for Medical Sciences, Little Rock, AR
- 3. **Intern Physician** *June 2016 - July 2017*  
Palestinian Ministry of Health, Nablus, State of Palestine

## HONORS AND ACHIEVEMENTS

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- 1. Sylvia Lawry Physician Fellowship Award, National Multiple Sclerosis Society, 2025-2027.
- 2. AAN Resident Scholarship to the Annual Meeting (2025)
- 3. Doris P. and Harry J. Wexler Research Award (2023): A prize recognizing outstanding research by a student or resident.
- 4. Ruth L. Kirschstein Institutional National Research Service Award for Postdoctoral Fellowship (2018); NIH-funded T32 training grant, National Institute on Drug Abuse.

## LICENSURE/CERTIFICATION

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1. USMLE Step 1 (Score: 264)
2. USMLE Step 2 CK (Score: 271)
3. USMLE Step 2 CS (Passed - first attempt)
4. USMLE Step 3 (Score 252)
5. American Board of Psychiatry & Neurology (pending)

## MEMBERSHIPS

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1. American Academy of Neurology (AAN), (March 2020 – Present): Member.
2. Washington University Postdoctoral Society, (March 2019 – June 2021): Executive committee.
3. International Federation of Medical Students' Associations (IFMSA-PS), (2011 - 2016): Member; (September 2013 - May 2014): Local Officer of Medical Education.

## PUBLICATIONS

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1. **Samara A**, Ontaneda D. Evolving the Diagnosis of Multiple Sclerosis: A New Landscape in Light of the 2024 McDonald Criteria. *Biomedicine*, October 2025.
2. **Samara A**, Cohen JA. Autologous hematopoietic stem cell transplantation in multiple sclerosis: where does it fit in the treatment algorithm? *Journal of Neurology, Neurosurgery & Psychiatry*, October 2025.
3. **Samara A**, Xiang B, Judge B, Ciotti JR, Yablonskiy DA, Cross AH, Brier MR. Increased periventricular thalamic damage gradient in multiple sclerosis detected by quantitative gradient echo MRI. *Multiple sclerosis and related disorders*, October 2024.
4. Bonomi S, **Samara A**, Kiguradze T, Dunham SR. Brainstem Ischemic Syndrome in NF2-related Schwannomatosis. *Annals of Neurology*, December 2023.
5. Bonomi S, **Samara A**, Balestra N, Padalia A, Benzinger TL, Kang P. Teaching NeuroImage: Severe Amyloid-Related Imaging Abnormalities After Anti-b-Amyloid Monoclonal Antibody Treatment. *Neurology*, October 2023.
6. Yu G.Z., Ly M., Mian A., Cramer A., Meysami S., Merrill D.A., **Samara A**, Eisenstein S.A., Hershey T, Babulal G., Lenze E.J., Morris J.C., Benzinger T.L.S., Raji C.A. Neuroinflammation: A Modifiable Pathway Linking Obesity, Alzheimer's disease, and Depression. *American Journal of Geriatric Psychiatry*, June 2023.
7. **Samara A**, Cantoni C, Piccio L, Cross AH, Chahin S. Obesity, Gut Microbiota, and Multiple Sclerosis: Unraveling the Connection. *Multiple Sclerosis and Related Disorders*, May 2023
8. Li A, **Samara A**, Ray MK, Rutlin J, Raji CA, Shimony JS, Sun P, Song SK, Hershey T, Eisenstein SA. Childhood obesity is linked to putative neuroinflammation in brain white matter, hypothalamus, and striatum. *Cerebral Cortex Communication*, May 2023.
9. Richie-Halford A, Cieslak M, Ai L, Caffarra S, Covitz S, Franco AR, Karipidis II, Kruper J, Milham M, Avelar-Pereira B, Roy E, Sydnor VJ, Yeatman JD; Fibr Community Science Consortium, Satterthwaite TD, Rokem A. An analysis-ready and quality-controlled resource for pediatric brain white-matter research. *Scientific Data*, October 2022.
10. O'Bryhim BE, **Samara A**, Chen L, Hershey T, Tyche L, Hoekel J. Longitudinal Changes in Vision and Retinal Morphological in Wolfram Syndrome. *Am J Ophthalmol*, July 2022

11. TMGH-Global COVID-19 Collaborative. Awareness and preparedness of healthcare workers against the first wave of the COVID-19 pandemic: A cross-sectional survey across 57 countries. *PLoS One*, December 2021
12. Soares C, **Samara A**, Altibi A, Samara A, Yuyun MF, Echouffo-Tcheugui JB, Masri A, Morrison A, Wu WC, Erqou S. Coronary artery calcification and plaque characteristics in people living with HIV: a Systematic Review and Meta-Analysis. *Journal of the American Heart Association*, October 2021
13. **Samara A**, Raji CA, Li Z, Hershey T. Comparison of hippocampus subfields segmentation agreement between two automated protocols across the adult lifespan. *American Journal of Neuroradiology*, October 2021
14. Mahtta D, Teebi A, Gad MA, **Samara A**, Barakat A, Masri A, MD, Elgendy IY. Methodological rigor and temporal trends of cardiovascular medicine meta-analyses in highest impact journals. *Journal of the American Heart Association*, September 2021
15. **Samara A**, Li Z, Rutlin J, Raji CA, Sun P, Song SK, Hershey T, Eisenstein SA. Nucleus accumbens microstructure mediates the relationship between obesity and eating behavior in young adults. *Obesity*, August 2021
16. **Samara A**, Gusman M, Aker L, Parsons MS, Mian AY, Eldaya RW. The Forgotten Phacomatoses: A Neuroimaging Review of Rare Neurocutaneous Disorders. *Current Problems in Diagnostic Radiology*, August 2021
17. Ly Maria, Raji CA, Yu Gary, Wang Q, Wang Y, Schindler Suzanne, An H, **Samara A**, Eisenstein SA, Hershey T, Smith G, Klein S, Ances B, Morris JC, Benzinger TL. Obesity and White Matter Neuroinflammation Related Edema in Alzheimer's Disease Biomarker Negative Cognitively Normal Individuals. *Journal of Alzheimer's Disease*, January 2021
18. **Samara A**, Herrmann S, Ditzler MG, Raj KM, Orlowski HLP, Eldaya RW. External ear diseases: a comprehensive review of the pathologies with neuroradiological considerations. *Current Problems in Diagnostic Radiology*, January 2021
19. **Samara A**, Lugar H, Hershey T, Shimony JS. Longitudinal assessment of neuroradiological features in Wolfram syndrome. *American Journal of Neuroradiology*, December 2020.
20. **Samara A**, Eldaya RW. Ocular and brain imaging findings in Peters' anomaly: a case report and literature review. *Radiology Case Reports*, July 2020
21. Eisenstein SA, Black KJ, **Samara A**, Koller J, Dunn J, Hershey T, Klein S, Smith G. Striatal Dopamine Responses to Feeding are Altered in People with Obesity. *Obesity*, April 2020
22. **Samara A**, Brent Berry, Malik Ghannam. Thalamic aphasia secondary to glioblastoma multiforme (GMB): a case report and review of the literature. *Journal of Clinical Neuroscience*, April 2020.
23. **Samara A**, Murphy T, Strain J, Rutlin J, Sun P, Neyman O, Sreevalsan N, Shimony J, Ances B, Song SK, Hershey T, Eisenstein S. Neuroinflammation and White Matter Alterations in Obesity Assessed by Diffusion Basis Spectrum Imaging. *Frontiers in Human Neuroscience*, January 2020
24. **Samara A**, Rahn R, Neyman O, Park K, Samara A, Marshall B, Dougherty J, Hershey T. Developmental hypomyelination in Wolfram Syndrome: New insights from neuroimaging and gene expression analyses. *Orphanet Journal of Rare Diseases*, December 2019.
25. **Samara A**, Nepute J, Lu HC, Perrin R, Eldaya R. Calvarial Langerhans Cell Histiocytosis in an Adult: typical imaging findings in an atypical age group. *Radiology Case Reports*, October 2019
26. Jumah F, Narayan V, **Samara A**, Quinoa TR, Dossani R, Gupta G, Nanda. Efficacy and safety of gamma knife radiosurgery for posterior cranial fossa meningioma: a systematic review. *Neurosurgical Reviews*, August 2019.

27. Masri A, **Samara A**, Baghal M, Saeed A, Althibi A, Barakat AF, Elgendy IY. The Role of Open Access in the Dissemination of Cardiovascular Science in the Era of Social Media. *Eur Heart J Qual Care Clin Outcomes*, July 2019.
28. **Samara A**, Berry B, Ghannam M. Posterior Reversible Encephalopathy Syndrome with Isolated Infratentorial Involvement: A case report. *Radiology Case Reports*, May 2019.
29. **Samara A**, Li X, Pivik RT, Badger TM, Ou X. Brain Activation to High-Calorie Food Images Differs in Healthy Normal Weight and Obese Children. *BMC obesity*, December 2018.
30. **Samara A**, Feng K, Pivik RT, Jarrett K, Badger TM, Ou X. DTI measured white matter microstructure correlates with memory performance in healthy children. *Journal of Neuroimaging*, November 2018.
31. Damiri B, Abualsoud MS, **Samara A**, Salameh S. Metabolic syndrome among overweight and obese adults in Palestinian refugee camps. *Diabetology & Metabolic Syndrome*, April 2018.
32. Aker L, Ghannam M, Alzuabi MA, Jumah F, Alkhdour SM, Mansour S, **Samara A**, Cronk K, Massengale J, Holsapple J, Adeeb N, Oskouian RJ, Tubbs RS. Molecular Biology and Interactions in Intervertebral Disc Development, Homeostasis, and Degeneration, with Emphasis on Future Therapies: A Systematic Review. *The Spine Scholar*, September 2017.
33. Ghannam M, Jumah F, Mansour S, **Samara A**, Alkhdour S, Alzuabi MA, Aker L, Adeeb N, Massengale J, Oskouian RJ, Shane Tubbs R. Surgical anatomy, radiological features, and molecular biology of the lumbar intervertebral discs. *Journal of Clinical Anatomy*, March 2017.

## PRESENTATIONS

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1. **Samara A**, Judge B, Salter A, Lancia S, Cantoni C, Smirnov R, Lee K, Agnihotri R, Perantie DC, Yablonskiy DA, Sukstansky A, Axtell RC, Korich J, Evans E, Edelson B, Artyomov MN, Pardo G, Stuve O, Obeidat AZ, Bar-Or A, Cross AH, Brier MR, and Wu GF (March, 2025). Relationship between CSF Cellular Populations and MRI Biomarkers of MS Disease Severity: Analysis of Baseline CLOCK-MS Participants. ECTRIMS – Barcelona.
2. Crosby H, **Samara A**, Maliszewski B, Keyrouz SG, Di Luca DG (March, 2025). Beyond the basal ganglia: acute hemiballismus secondary to a parietal stroke. Movement Disorder Society Annual meeting Poster session.
3. Petit-Frere C, Bonomi S, **Samara A**, Al-Lozi M, Perez E (July, 2024). Neurosyphilis Masquerading as Longitudinally Extensive Transverse Myelitis and Radiculopathy. AAN Summer Conference: Autoimmune neurology.
4. Perez EJ, **Samara A**, Budelier MM, Gronowski AM, Bucelli RC (October, 2022). Interdisciplinary Initiative to Evaluate and Optimize Neurological Autoantibody Send Out Testing. The Neurohospitalist Society 10th Annual Meeting.
5. **Samara A**, Li Z, Rutlin J, Raji CA, Sun P, Song SK, Hershey T, Eisenstein SA (March 2021). Nucleus accumbens microstructure mediates the relationship between obesity and eating behavior in adults. *2021 Mallinckrodt Institute of Radiology Research Symposium*; St. Louis, MO, USA – Poster Presentation.
6. **Samara A**. (February, 2021). Assessing neuroinflammation in obesity using diffusion imaging. NIDA T32 research showcase; St. Louis, MO, USA – Oral presentation.
7. **Samara A**, Rutlin J, Neyman O, Sun P, Song SK, Hershey T, Eisenstein S (November 2019). Neuroinflammation and cognition in obesity: Data collection update. *Diabetes Day Symposium 2019*; St. Louis, MO, USA – Poster Presentation.
8. **Samara A**, Murphy T, Sreevalsan N, Rutlin J, Song SK, Eisenstein S, Hershey T. (March 2019). Neuroinflammation in obesity assessed by Diffusion Basis Spectrum Imaging. *2019*

*Mallinckrodt Institute of Radiology Research Symposium*; St. Louis, MO, USA – Poster Presentation.

9. **Samara A**, Murphy T, Sreevalsan N, Rutlin J, Song SK, Eisenstein S, Hershey T. (November 2018). Neuroinflammation in obesity assessed by Diffusion Basis Spectrum Imaging. *Diabetes Day Symposium 2018*; St. Louis, MO, USA – Poster Presentation.

## **SKILLS:**

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- **Image acquisition:** structural MRI, diffusion tensor imaging (DTI), and limited expertise in positron emission tomography.
- **Neuroimaging analysis:** advanced expertise in structural brain imaging processing and preprocessing (e.g., diffusion MRI) using FSL, and FreeSurfer. Some experience with functional neuroimaging analysis (e.g., region of interest (ROI) analysis, and seed-based functional connectivity).
- **Programming languages:** MATLAB; R statistical computing and graphics; and Linux shell scripting and command-line tools.
- **Statistical analysis:** Regression analysis; Data visualization; Multilevel modeling (mixed-effects models); and Mediation analysis.
- **Citation Management:** EndNote; and Mendeley.

## **LANGUAGES**

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**English** (Native/functionally native); **Arabic** (Native/functionally native).

## **VOLUNTEER EXPERIENCES:**

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- Volunteer at the 2025 Medical Student Symposium, American Academy of Neurology Annual Meeting, an annual event that gives medical students understanding about careers in neurology, including the various subspecialty areas, and provides opportunities to network with residents and neurologists.
- Editor (2023 - Present), Neurology® Resident & Fellow Section (RFS) Editorial Board
- Guest Editor (Frontiers in Human Neuroscience) – Research topic: "Exploring the Link between Obesity and Neuroinflammation: A Neuroimaging-Based Approach" – July 2023
- Postdoctoral mentorship program (March 2020 – March 2021). Assigned to mentor junior postdoctoral fellows.
- Local Officer of Medical Education (September 2013 - May 2014). International Federation of Medical Students' Associations (IFMSA-PS)