



## Shawn Barton, MD, PhD

Instructor, Adult Neurology

### CLINICAL OFFICE (PRIMARY)

- **Neurology**

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### Bio

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#### BIO

Dr. Shawn Barton is a board-certified, fellowship-trained neurologist with the Stanford Health Care Movement Disorders Center. He is also a clinical instructor in the Department of Neurology & Neurological Sciences at Stanford University School of Medicine.

Dr. Barton specializes in movement disorders, such as Parkinson's disease, essential tremor, and dystonia. With a deep understanding of neuroscience, he expertly diagnoses and treats many neurodegenerative and genetic conditions. He provides compassionate care focused on relieving symptoms and improving everyday life.

During his doctoral studies, Dr. Barton investigated drug delivery and the development of novel biomarkers in Alzheimer's disease using preclinical mouse models. As a physician-scientist, his research interests include identifying biomarkers for Parkinson's disease and other neurodegenerative diseases. He also focuses on developing clinical trials to advance potential disease-modifying therapies.

Dr. Barton has published his findings in several peer-reviewed journals, including *Science*, *Journal of Alzheimer's Disease*, and *Journal of Biomolecular NMR*. He also has presented at national conferences, including annual meetings of the American Academy of Neurology and the Society of General Internal Medicine. He has shared his research on a range of topics, including identifying methods of increasing blood-brain barrier penetrance for therapeutic delivery and using inhaled fluorescent markers to detect amyloid-beta plaques (a protein known to build up in the brain with Alzheimer's disease) in the retina.

Dr. Barton is a member of the American Academy of Neurology, American Neurological Association, and International Parkinson and Movement Disorder Society.

#### CLINICAL FOCUS

- Neurology

## ACADEMIC APPOINTMENTS

- Instructor, Adult Neurology

## HONORS AND AWARDS

- Best Oral Presentation, Vanderbilt University Institute of Imaging Science Retreat
- Futures in Neurologic Research Scholarship, American Academy of Neurology (AAN)
- Medical Student Prize for Excellence in Neurology, AAN
- Neurology Residency Research Track Grant, Emory University
- Travel Award, Combining Clinical and Research Careers Symposium
- Medical Scientist Training Program (MSTP) Travel Award to the National MD-PhD Student Conference, Vanderbilt University

## BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, AAN (2019 - present)
- Member, American Neurological Association (2025 - present)
- Member, International Parkinson and Movement Disorder Society (2023 - present)

## PROFESSIONAL EDUCATION

- Board Certification: Neurology, American Board of Psychiatry and Neurology (2024)
- Residency: Emory University School of Medicine (2024) GA
- Internship: Emory University School of Medicine (2021) GA
- Medical Education: Vanderbilt University School of Medicine (2020) TN

## Publications

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### PUBLICATIONS

- **COVID-19 infection in myasthenia gravis: Clinical course and outcomes.** *Muscle & nerve*  
Thomas, E. V., Bou, G., Barton, S., Hutto, S., Garcia-Santibanez, R.  
2023; 68 (2): 171-175
- **Inhalable Thioflavin S for the Detection of Amyloid Beta Deposits in the Retina.** *Molecules (Basel, Switzerland)*  
Barton, S. M., To, E., Rogers, B. P., Whitmore, C., Uppal, M., Matsubara, J. A., Pham, W.  
2021; 26 (4)
- **Lipopolysaccharide Induced Opening of the Blood Brain Barrier on Aging 5XFAD Mouse Model.** *Journal of Alzheimer's disease : JAD*  
Barton, S. M., Janve, V. A., McClure, R., Anderson, A., Matsubara, J. A., Gore, J. C., Pham, W.  
2019; 67 (2): 503-513
- **Specific Molecular Recognition as a Strategy to Delineate Tumor Margin Using Topically Applied Fluorescence Embedded Nanoparticles**  
Barton, S., Li, B., Siuta, M., Janve, V., Song, J., Holt, C., Tomono, T., Ukawa, M., Kumagai, H., Tobita, E., Wilson, K., Sakuma, S., Pham, et al  
Precision Nanomedicine 1.3.  
2018 194-207
- **Aerosol Delivery of Curcumin Reduced Amyloid- $\beta$  Deposition and Improved Cognitive Performance in a Transgenic Model of Alzheimer's Disease.** *Journal of Alzheimer's disease : JAD*  
McClure, R., Ong, H., Janve, V., Barton, S., Zhu, M., Li, B., Dawes, M., Jerome, W. G., Anderson, A., Massion, P., Gore, J. C., Pham, W.  
2017; 55 (2): 797-811
- **RNA structure. Structure of the HIV-1 RNA packaging signal.** *Science (New York, N.Y.)*  
Keane, S. C., Heng, X., Lu, K., Kharytonchyk, S., Ramakrishnan, V., Carter, G., Barton, S., Hosic, A., Florwick, A., Santos, J., Bolden, N. C., McCowin, S., Case, et al

2015; 348 (6237): 917-21

- **Database proton NMR chemical shifts for RNA signal assignment and validation.** *Journal of biomolecular NMR*

Barton, S., Heng, X., Johnson, B. A., Summers, M. F.

2013; 55 (1): 33-46

- **NMR detection of structures in the HIV-1 5'-leader RNA that regulate genome packaging.** *Science (New York, N.Y.)*

Lu, K., Heng, X., Garyu, L., Monti, S., Garcia, E. L., Kharytonchyk, S., Dorjsuren, B., Kulandaivel, G., Jones, S., Hiremath, A., Divakaruni, S. S., LaCotti, C., Barton, et al

2011; 334 (6053): 242-5

- **Major groove width variations in RNA structures determined by NMR and impact of  $^{13}\text{C}$  residual chemical shift anisotropy and  $^1\text{H}$ - $^{13}\text{C}$  residual dipolar coupling on refinement.** *Journal of biomolecular NMR*

Tolbert, B. S., Miyazaki, Y., Barton, S., Kinde, B., Starck, P., Singh, R., Bax, A., Case, D. A., Summers, M. F.

2010; 47 (3): 205-19