

Stanford



Edward N. Wilson

Instructor, Neurology & Neurological Sciences

Bio

ACADEMIC APPOINTMENTS

- Instructor, Neurology & Neurological Sciences

HONORS AND AWARDS

- Dean of Medicine's Postdoctoral Fellowship, Stanford University (2018)

PROFESSIONAL EDUCATION

- PhD, McGill University , Neuroscience (2016)
- Master of Science, McGill University , Psychology (2011)
- Bachelor of Science, Dalhousie University , Neuroscience and Biology (2008)

LINKS

- Alzheimer's Disease Research Center: <https://med.stanford.edu/adrc.html>
- Wu Tsai Neurosciences Institute: <https://neuroscience.stanford.edu/>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Single-cell transcriptomic profiling of immune cells in Alzheimer's disease brain

Alzheimer's disease, Parkinson's disease and multiple sclerosis biomarkers

Alzheimer's disease experimental therapeutics

Publications

PUBLICATIONS

- **PET imaging of TREM1 identifies CNS-infiltrating myeloid cells in a mouse model of multiple sclerosis.** *Science translational medicine*
Chaney, A. M., Cropper, H. C., Jain, P., Wilson, E., Simonetta, F., Johnson, E. M., Alam, I. S., Patterson, I. T., Swarovski, M., Stevens, M. Y., Wang, Q., Azevedo, C., Nagy, et al
2023; 15 (702): eabm6267
- **Proteogenomic analysis of human cerebrospinal fluid identifies neurologically relevant regulation and informs causal proteins for Alzheimer's disease.** *Research square*
Cruchaga, C., Western, D., Timsina, J., Wang, L., Wang, C., Yang, C., Ali, M., Beric, A., Gorijala, P., Kohlfeld, P., Budde, J., Levey, A., Morris, et al

2023

- **Performance of a fully-automated Lumipulse plasma phospho-tau181 assay for Alzheimer's disease.** *Alzheimer's research & therapy*
Wilson, E. N., Young, C. B., Ramos Benitez, J., Swarovski, M. S., Feinstein, I., Vandijck, M., Le Guen, Y., Kasireddy, N. M., Shahid, M., Corso, N. K., Wang, Q., Kennedy, G., Trelle, et al
2022; 14 (1): 172
- **alpha-synuclein seed amplification in CSF and brain from patients with different brain distributions of pathological alpha-synuclein in the context of co-pathology and non-LBD diagnoses.** *Annals of neurology*
Arnold, M. R., Coughlin, D. G., Brumbach, B. H., Smirnov, D. S., Concha-Marambio, L., Farris, C. M., Ma, Y., Inc, A., Kim, Y., Wilson, E. N., Kaye, J. A., Hiniker, A., Woltjer, et al
2022
- **Limited proteolysis-mass spectrometry reveals aging-associated changes in cerebrospinal fluid protein abundances and structures (vol 2, pg 379, 2022)** *NATURE AGING*
Shuken, S. R., Rutledge, J., Iram, T., Losada, P., Wilson, E. N., Andreasson, K. I., Leib, R. D., Wyss-Coray, T.
2022; 2 (5): 455
- **Limited proteolysis-mass spectrometry reveals aging-associated changes in cerebrospinal fluid protein abundances and structures** *Nature Aging*
Shuken, S. R., Rutledge, J., Iram, T., Moran Losada, P., Wilson, E. N., Andreasson, K. I., Leib, R. D., Wyss-Coray, T.
2022
- **Plasma Biomarkers of Tau and Neurodegeneration During Major Cardiac and Noncardiac Surgery.** *JAMA neurology*
Feinstein, I., Wilson, E. N., Swarovski, M. S., Andreasson, K. I., Angst, M. S., Greicius, M. D.
2021
- **Association of CSF Biomarkers with Hippocampal-dependent Memory in Preclinical Alzheimer Disease.** *Neurology*
Trelle, A. N., Carr, V. A., Wilson, E. N., Swarovski, M. S., Hunt, M. P., Toueg, T. N., Tran, T. T., Channappa, D. n., Corso, N. K., Thieu, M. K., Jayakumar, M. n., Nadiadwala, A. n., Guo, et al
2021
- **TAM-ping down amyloid in Alzheimer's disease.** *Nature immunology*
Wilson, E. N., Andreasson, K. I.
2021
- **TREM1-PET imaging of pro-inflammatory myeloid cells distinguishes active disease from remission in Multiple Sclerosis**
Chaney, A., Wilson, E., Jain, P., Cropper, H., Swarovski, M., Lucot, K., Vogel, H., Andreasson, K., James, M. L.
SOC NUCLEAR MEDICINE INC.2020
- **Soluble TREM2 is elevated in Parkinson's disease subgroups with increased CSF tau.** *Brain : a journal of neurology*
Wilson, E. N., Swarovski, M. S., Linortner, P. n., Shahid, M. n., Zuckerman, A. J., Wang, Q. n., Channappa, D. n., Minhas, P. S., Mhatre, S. D., Plowey, E. D., Quinn, J. F., Zabetian, C. P., Tian, et al
2020
- **NP03, a Microdose Lithium Formulation, Blunts Early Amyloid Post-Plaque Neuropathology in McGill-R-Thy1-APP Alzheimer-Like Transgenic Rats.** *Journal of Alzheimer's disease : JAD*
Wilson, E. N., Do Carmo, S., Welikovitch, L. A., Hall, H., Aguilar, L. F., Foret, M. K., Iulita, M. F., Jia, D. T., Marks, A. R., Allard, S., Emmerson, J. T., Ducatenzeiler, A., Cuello, et al
2019
- **PGE(2) signaling via the neuronal EP2 receptor increases injury in a model of cerebral ischemia** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Liu, Q., Liang, X., Wang, Q., Wilson, E. N., Lam, R., Wang, J., Kong, W., Tsai, C., Pan, T., Larkin, P. B., Shamloo, M., Andreasson, K. I.
2019; 116 (20): 10019-24
- **Peripheral TREM1 responses to brain and intestinal immunogens amplify stroke severity** *Nature Immunology*
Liu, Q., Johnson, E., et al
2019
- **Microdose Lithium NP03 Diminishes Pre-Plaque Oxidative Damage and Neuroinflammation in a Rat Model of Alzheimer's-like Amyloidosis** *Current Alzheimer Research*
Wilson, E. N., Do Carmo, S., Iulita, M., Hall, H., Austin, G. L., Jia, D., Malcolm, J. C., Foret, M. K., Marks, A. R., Butterfield, D., Cuello, A.

2018

- **Intraneuronal Amyloid Beta Accumulation Disrupts Hippocampal CRTC1-Dependent Gene Expression and Cognitive Function in a Rat Model of Alzheimer Disease** *CEREBRAL CORTEX*
Wilson, E. N., Abela, A. R., Do Carmo, S., Allard, S., Marks, A. R., Welikovitsh, L. A., Ducatenzeiler, A., Chudasama, Y., Cuello, A. C.
2017; 27 (2): 1501-1511
- **BACE1 inhibition by microdose lithium formulation NP03 rescues memory loss and early stage amyloid neuropathology** *Translational Psychiatry*
Wilson, E. N., Do Carmo, S., Iulita, M., Hall, H., Ducatenzeiler, A., Marks, A. R., Allard, S., Jia, D., Windheim, J., Cuello, A. C.
2017; 7: 1-10
- **Differential deregulation of NGF and BDNF neurotrophins in a transgenic rat model of Alzheimer's disease** *Neurobiology of Disease*
Iulita, M., Bistué Millón, M., Pentz, R., Aguilar, L., Do Carmo, S., Allard, S., Michalski, B., Wilson, E. N., Ducatenzeiler, A., Bruno, M. A., Fahnestock, M., Cuello, A.
2017: 307–23
- **Full Reversal of Cognitive Decline in Rat Model of Alzheimer Disease**
Wilson, E. N., Iulita, M., Do Carmo, S., Cuello, A.
CANADIAN PSYCHOLOGICAL ASSOC.2015: 375
- **Longitudinal testing of hippocampal plasticity reveals the onset and maintenance of endogenous human A β -induced synaptic dysfunction in individual freely behaving pre-plaque transgenic rats: rapid reversal by anti-A β agents.** *Acta neuropathologica communications*
Qi, Y., Klyubin, I., Harney, S. C., Hu, N., Cullen, W. K., Grant, M. K., Steffen, J., Wilson, E. N., Do Carmo, S., Remy, S., Fuhrmann, M., Ashe, K. H., Cuello, et al
2014; 2: 175-?
- **Neurovascular architecture following monocular deprivation in monkey primary visual cortex**
Wilson, E. N., Duffy, K. R.
CANADIAN PSYCHOLOGICAL ASSOC.2010: 310