



## Katrin Andreasson

Edward F. and Irene Thiele Pimley Professor of Neurology and Neurological Sciences

### CONTACT INFORMATION

- **Alternate Contact**

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### Bio

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#### ACADEMIC APPOINTMENTS

- Professor, Neurology
- Member, Bio-X
- Member, Cardiovascular Institute
- Member, Wu Tsai Neurosciences Institute

#### PROFESSIONAL EDUCATION

- B.A.S., M.S., Stanford University , Biology Comparative Literature
- M.D., Columbia University College of Physicians & Surgeons , Medicine

#### LINKS

- Neurology: <http://med.stanford.edu/neurology/index.html>
- Andreasson Lab Site: <http://neurology.stanford.edu/labs/andreassonlab/>
- Stanford Alzheimer's Disease Research Center: <http://med.stanford.edu/adrc.html>

### Research & Scholarship

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#### CURRENT RESEARCH AND SCHOLARLY INTERESTS

We are investigating the role that innate immune responses play in the initiation and progression of neurological diseases. Recent advances in human genetics, particularly for neurodegenerative disorders like Alzheimer's disease, have highlighted a causal role for a disrupted immune response in disease pathogenesis. An injurious immune response may be a common denominator across many neurological disorders, both acute (brain trauma or stroke) and chronic (epilepsy, Parkinson's disease, Alzheimer's for eg.). An understanding of how innate immune responses cause neurological disease will be essential if we are to develop disease-modifying therapies for our patients.

Through a systems biology approach, we are identifying novel immune pathways that may play critical roles in maladaptive brain inflammation, and we are working to understand how these responses cause neurodegeneration and circuit disruption. Some of these new pathways are relevant to immune cell metabolism and the effect of metabolic regulators of immune function. Our objectives are (1) to understand how aberrant CNS and/or peripheral

innate immune responses cause synapse loss and contribute to the vulnerability of selected circuits in different neurodegenerative disorders, and (2) to develop preventive and therapeutic strategies targeting these inflammatory pathways in patients with neurologic diseases.

## Teaching

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### STANFORD ADVISEES

#### Doctoral Dissertation Reader (AC)

Karen Bradshaw, Bryan Cannon, Amelia Farinas, Gabriella Muwanga, Rahul Nagvekar, Archana Shankar

#### Postdoctoral Faculty Sponsor

Melek Firat Altay, Travis Conley, Joshua Crapser, Hannah Ennerfelt, Tae Hyun Kweon, Manling Xie, Fuwen Yao

#### Doctoral Dissertation Advisor (AC)

Yoo Jin Jung

#### Doctoral Dissertation Co-Advisor (AC)

Jolie Huang

### GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Immunology (Phd Program)
- Neurosciences (Phd Program)

## Publications

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### PUBLICATIONS

- **Restoring hippocampal glucose metabolism rescues cognition across Alzheimer's disease pathologies.** *Science (New York, N.Y.)*  
Minhas, P. S., Jones, J. R., Latif-Hernandez, A., Sugiura, Y., Durairaj, A. S., Wang, Q., Mhatre, S. D., Uenaka, T., Crapser, J., Conley, T., Ennerfelt, H., Jung, Y. J., Liu, et al  
2024; 385 (6711): eabm6131
- **TREM1 disrupts myeloid bioenergetics and cognitive function in aging and Alzheimer disease mouse models.** *Nature neuroscience*  
Wilson, E. N., Wang, C., Swarovski, M. S., Zera, K. A., Ennerfelt, H. E., Wang, Q., Chaney, A., Gauba, E., Ramos Benitez, J. A., Le Guen, Y., Minhas, P. S., Panchal, M., Tan, et al  
2024
- **Aging disrupts circadian gene regulation and function in macrophages.** *Nature immunology*  
Blacher, E., Tsai, C., Litichevskiy, L., Shipony, Z., Iweka, C. A., Schneider, K. M., Chuluun, B., Heller, H. C., Menon, V., Thaiss, C. A., Andreasson, K. I.  
1800
- **Restoring metabolism of myeloid cells reverses cognitive decline in ageing.** *Nature*  
Minhas, P. S., Latif-Hernandez, A., McReynolds, M. R., Durairaj, A. S., Wang, Q., Rubin, A., Joshi, A. U., He, J. Q., Gauba, E., Liu, L., Wang, C., Linde, M., Sugiura, et al  
2021
- **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
- **Peripheral TREM1 responses to brain and intestinal immunogens amplify stroke severity** *Nature Immunology*  
Liu, Q., Johnson, E., et al  
2019
- **Macrophage de novo NAD<sup>+</sup> synthesis specifies immune function in aging and inflammation.** *Nature immunology*

- Minhas, P. S., Liu, L., Moon, P. K., Joshi, A. U., Dove, C., Mhatre, S., Contrepois, K., Wang, Q., Lee, B. A., Coronado, M., Bernstein, D., Snyder, M. P., Migaud, et al  
2018
- **Targeting innate immunity for neurodegenerative disorders of the central nervous system.** *Journal of neurochemistry*  
Andreasson, K. I., Bachstetter, A. D., Colonna, M., Ginhoux, F., Holmes, C., Lamb, B., Landreth, G., Lee, D. C., Low, D., Lynch, M. A., Monsonego, A., O'Banion, M. K., Pekny, et al  
2016; 138 (5): 653-693
  - **Cyclooxygenase inhibition targets neurons to prevent early behavioural decline in Alzheimer's disease model mice** *BRAIN*  
Woodling, N. S., Colas, D., Wang, Q., Minhas, P., Panchal, M., Liang, X., Mhatre, S. D., Brown, H., Ko, N., Zagol-Ikapitte, I., Van der Hart, M., Khroyan, T. V., Chuluun, et al  
2016; 139: 2063-2081
  - **Microglial Malfunction: The Third Rail in the Development of Alzheimer's Disease.** *Trends in neurosciences*  
Mhatre, S. D., Tsai, C. A., Rubin, A. J., James, M. L., Andreasson, K. I.  
2015; 38 (10): 621-636
  - **Prostaglandin signaling suppresses beneficial microglial function in Alzheimer's disease models** *JOURNAL OF CLINICAL INVESTIGATION*  
Johansson, J. U., Woodling, N. S., Wang, Q., Panchal, M., Hang, X., Trueba-Saiz, A., Brown, H. D., Mhatre, S. D., Loui, T., Andreasson, K. I.  
2015; 125 (1): 350-364
  - **18F-PI-2620 Tau PET is associated with cognitive and motor impairment in Lewy body disease.** *Brain communications*  
Winer, J. R., Vossler, H., Young, C. B., Smith, V., Romero, A., Shahid-Besanti, M., Abdelnour, C., Wilson, E. N., Anders, D., Pacheco Morales, A., Andreasson, K. I., Yutsis, M. V., Henderson, et al  
2025; 7 (1): fcae458
  - **A single-cell atlas to map sex-specific gene-expression changes in blood upon neurodegeneration.** *Nature communications*  
Grandke, F., Fehlmann, T., Kern, F., Gate, D. M., Wolff, T. W., Leventhal, O., Channappa, D., Hirsch, P., Wilson, E. N., Meese, E., Liu, C., Shi, Q., Flotho, et al  
2025; 16 (1): 1965
  - **Plasma A $\beta$ 42/A $\beta$ 40 is sensitive to early cerebral amyloid accumulation and predicts risk of cognitive decline across the Alzheimer's disease spectrum.** *Alzheimer's & dementia : the journal of the Alzheimer's Association*  
Trelle, A. N., Young, C. B., Vossler, H., Ramos Benitez, J., Cody, K. A., Mendiola, J. H., Swarovski, M. S., Guen, Y. L., Feinstein, I., Butler, R. R., Channappa, D., Romero, A., Park, et al  
2024
  - **Neuroinflammation in Alzheimer disease.** *Nature reviews. Immunology*  
Heneka, M. T., van der Flier, W. M., Jessen, F., Hoozemans, J., Thal, D. R., Boche, D., Brosseron, F., Teunissen, C., Zetterberg, H., Jacobs, A. H., Edison, P., Ramirez, A., Cruchaga, et al  
2024
  - **Top-down attention and Alzheimer's pathology impact cortical selectivity during learning, influencing episodic memory in older adults.** *bioRxiv : the preprint server for biology*  
Sheng, J., Trelle, A. N., Romero, A., Park, J., Tran, T. T., Sha, S. J., Andreasson, K. I., Wilson, E. N., Mormino, E. C., Wagner, A. D.  
2024
  - **Basic Science and Pathogenesis.** *Alzheimer's & dementia : the journal of the Alzheimer's Association*  
Talozzi, L., Peña-Tauber, A., Jensen, T. D., Wilson, E. N., Young, C. B., Stewart, I., Cobos, I., Vallejo, K., Hefti, M. M., Guen, Y. L., Williams, K., Vossler, H., Gorzynski, et al  
2024; 20 Suppl 1: e090996
  - **Biomarkers.** *Alzheimer's & dementia : the journal of the Alzheimer's Association*  
Smith, A., Plastini, M. J., Ashton, N. J., Montoliu-Gaya, L., Wilson, E. N., Arslan, B., Young, C. B., Winer, J. R., Shahid, M., Vossler, H., Kerchner, G. A., Cholerton, B., Andreasson, et al  
2024; 20 Suppl 2: e091458
  - **Alzheimer's Imaging Consortium.** *Alzheimer's & dementia : the journal of the Alzheimer's Association*  
Talozzi, L., Peña-Tauber, A., Jensen, T. D., Wilson, E. N., Young, C. B., Stewart, I., Cobos, I., Vallejo, K., Hefti, M. M., Guen, Y. L., Williams, K., Vossler, H., Gorzynski, et al

2024; 20 Suppl 9: e093931

- **Longevity biotechnology: bridging AI, biomarkers, geroscience and clinical applications for healthy longevity.** *Aging*  
Lyu, Y. X., Fu, Q., Wilczok, D., Ying, K., King, A., Antebi, A., Vojta, A., Stolzing, A., Moskalev, A., Georgievskaya, A., Maier, A. B., Olsen, A., Groth, et al  
2024; 16
- **Parkinson's disease is characterized by vitamin B6-dependent inflammatory kynurenine pathway dysfunction.** *Research square*  
Wilson, E., Umans, J., Swarovski, M., Minhas, P., Middtun, Ø., Ulvik, A. A., Shahid-Besanti, M., Linortner, P., Mhatre, S., Wang, Q., Channappa, D., Corso, N., Tian, et al  
2024
- **Plasma pTau181 Reveals a Pathological Signature that Predicts Cognitive Outcomes in Lewy Body Disease.** *Annals of neurology*  
Abdelnour, C., Young, C. B., Shahid-Besanti, M., Smith, A., Wilson, E. N., Ramos Benitez, J., Vossler, H., Plastini, M. J., Winer, J. R., Kerchner, G. A., Cholerton, B., Andreasson, K. I., Henderson, et al  
2024
- **A TrkB and TrkC partial agonist restores deficits in synaptic function and promotes activity-dependent synaptic and microglial transcriptomic changes in a late-stage Alzheimer's mouse model.** *Alzheimer's & dementia : the journal of the Alzheimer's Association*  
Latif-Hernandez, A., Yang, T., Raymond-Butler, R. 3., Losada, P. M., Minhas, P. S., White, H., Tran, K. C., Liu, H., Simmons, D. A., Langness, V., Andreasson, K. I., Wyss-Coray, T., Longo, et al  
2024
- **Multiple biomarkers improve diagnostic accuracy across Lewy body and Alzheimer's disease spectra.** *Annals of clinical and translational neurology*  
Plastini, M. J., Abdelnour, C., Young, C. B., Wilson, E. N., Shahid-Besanti, M., Lamoureux, J., Andreasson, K. I., Kerchner, G. A., Montine, T. J., Henderson, V. W., Poston, K. L.  
2024
- **Post-translational modifications linked to preclinical Alzheimer's disease-related pathological and cognitive changes.** *Alzheimer's & dementia : the journal of the Alzheimer's Association*  
Abiose, O., Rutledge, J., Moran-Losada, P., Belloy, M. E., Wilson, E. N., He, Z., Trelle, A. N., Channappa, D., Romero, A., Park, J., Yutsis, M. V., Sha, S. J., Andreasson, et al  
2023
- **Organ aging signatures in the plasma proteome track health and disease.** *Nature*  
Oh, H. S., Rutledge, J., Nachun, D., Pálovics, R., Abiose, O., Moran-Losada, P., Channappa, D., Urey, D. Y., Kim, K., Sung, Y. J., Wang, L., Timsina, J., Western, et al  
2023; 624 (7990): 164-172
- **Immunosuppression with Targeted Therapies Reduces Morbidity and Mortality in Pre-Capillary Pulmonary Hypertension Associated with Systemic Sclerosis: A EUSTAR Analysis**  
Bruni, C., Fretheim, H., Tofani, L., Weber, Y., Hachulla, E., Carreira, P., Giuggioli, D., Airo, P., Siegert, E., Mueller-Ladner, U., Cerinic, M., Riemekasten, G., Simeon-Aznar, et al  
WILEY.2023: 3385-3389
- **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
- **Myeloid deficiency of the intrinsic clock protein BMAL1 accelerates cognitive aging by disrupting microglial synaptic pruning.** *Journal of neuroinflammation*  
Iweka, C. A., Seigneur, E., Hernandez, A. L., Paredes, S. H., Cabrera, M., Blacher, E., Pasternak, C. T., Longo, F. M., de Lecea, L., Andreasson, K. I.  
2023; 20 (1): 48
- **Reduced expression of the cell intrinsic clock protein Bmal1 in myeloid cells accelerates cognitive decline and alters microglial function in aging mice**  
Iweka, C., Seigneur, E., Latif-Hernandez, A., Paredes, S., Cabrera, M., Blacher, E., Wang, Q., Longo, F., DeLecea, L., Andreasson, K.  
AMER SOC CELL BIOLOGY.2023: 761
- **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
- **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
  - **Publisher Correction: Limited proteolysis-mass spectrometry reveals aging-associated changes in cerebrospinal fluid protein abundances and structures. Nature aging**  
Shuken, S. R., Rutledge, J., Iram, T., Losada, P. M., Wilson, E. N., Andreasson, K. I., Leib, R. D., Wyss-Coray, T.  
2022; 2 (5): 455
  - **Odorant receptors in macrophages: potential targets for atherosclerosis. Trends in immunology**  
Wang, C., Andreasson, K. I.  
2022
  - **Group 3 innate lymphoid cells produce the growth factor HB-EGF to protect the intestine from TNF-mediated inflammation. Nature immunology**  
Zhou, L., Zhou, W., Joseph, A. M., Chu, C., Putzel, G. G., Fang, B., Teng, F., Lyu, M., Yano, H., Andreasson, K. I., Mekada, E., Eberl, G., Sonnenberg, et al  
1800; 23 (2): 251-261
  - **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
  - **A mitochondrial membrane-bridging machinery mediates signal transduction of intramitochondrial oxidation. Nature metabolism**  
Li, L., Conradson, D. M., Bharat, V., Kim, M. J., Hsieh, C., Minhas, P. S., Papakyrikos, A. M., Durairaj, A. S., Ludlam, A., Andreasson, K. I., Partridge, L., Cianfrocco, M. A., Wang, et al  
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
  - **The Dueling Duo: IL10 and TNF Face Off in Microglial Recovery from Endotoxin Challenge. Immunity**  
Minhas, P. S., Durairaj, A. S., Andreasson, K. I.  
2020; 53 (5): 897-99
  - **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
  - **Loss of DP1 Aggravates Vascular Remodeling in Pulmonary Arterial Hypertension via mTORC1 Signaling. American journal of respiratory and critical care medicine**  
He, Y. n., Zuo, C. n., Jia, D. n., Bai, P. n., Kong, D. n., Chen, D. n., Liu, G. n., Li, J. n., Wang, Y. n., Chen, G. n., Yan, S. n., Xiao, B. n., Zhang, et al  
2020
  - **Author Correction: Fragmented mitochondria released from microglia trigger A1 astrocytic response and propagate inflammatory neurodegeneration. Nature neuroscience**

- Joshi, A. U., Minhas, P. S., Liddelw, S. A., Haileselassie, B. n., Andreasson, K. I., Dorn, G. W., Mochly-Rosen, D. n.  
2020
- **Mitochondrial dysfunction mediated through dynamin-related protein 1 (Drp1) propagates impairment in blood brain barrier in septic encephalopathy.** *Journal of neuroinflammation*  
Haileselassie, B. n., Joshi, A. U., Minhas, P. S., Mukherjee, R. n., Andreasson, K. I., Mochly-Rosen, D. n.  
2020; 17 (1): 36
  - **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
  - **PGE2 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. n., Liang, X. n., Wang, Q. n., Wilson, E. N., Lam, R. n., Wang, J. n., Kong, W. n., Tsai, C. n., Pan, T. n., Larkin, P. B., Shamloo, M. n., Andreasson, K. I.  
2019
  - **Aldehyde dehydrogenase 2 activity and aldehydic load contribute to neuroinflammation and Alzheimer's disease related pathology.** *Acta neuropathologica communications*  
Joshi, A. U., Van Wassenhove, L. D., Logas, K. R., Minhas, P. S., Andreasson, K. I., Weinberg, K. I., Chen, C. H., Mochly-Rosen, D. n.  
2019; 7 (1): 190
  - **Therapeutic strategies for diffuse midline glioma from high-throughput combination drug screening.** *Science translational medicine*  
Lin, G. L., Wilson, K. M., Ceribelli, M. n., Stanton, B. Z., Woo, P. J., Kreimer, S. n., Qin, E. Y., Zhang, X. n., Lennon, J. n., Nagaraja, S. n., Morris, P. J., Quezada, M. n., Gillespie, et al  
2019; 11 (519)
  - **Fragmented mitochondria released from microglia trigger A1 astrocytic response and propagate inflammatory neurodegeneration.** *Nature neuroscience*  
Joshi, A. U., Minhas, P. S., Liddelw, S. A., Haileselassie, B. n., Andreasson, K. I., Dorn, G. W., Mochly-Rosen, D. n.  
2019; 22 (10): 1635–48
  - **Macrophage de novo NAD(+) synthesis specifies immune function in aging and inflammation** *NATURE IMMUNOLOGY*  
Minhas, P. S., Liu, L., Moon, P. K., Joshi, A. U., Dove, C., Mhatre, S., Contrepolis, K., Wang, Q., Lee, B. A., Coronado, M., Bernstein, D., Snyder, M. P., Migaud, et al  
2019; 20 (1): 50-+
  - **TREM1-TARGETED PET IMAGING OF TUMOR-ASSOCIATED MACROPHAGES IN AN ORTHOTOPIC GLIOBLASTOMA MOUSE MODEL**  
Johnson, E., Murty, S., Mayer, A., Tsai, C., Mehta, S., Ilovich, O., Massoud, T., Andreasson, K., James, M.  
OXFORD UNIV PRESS INC.2017: 249
  - **Anti-Inflammatory and Neuroprotective Effects of PGE(2) EP4 Signaling in Models of Parkinson's Disease** *JOURNAL OF NEUROIMMUNE PHARMACOLOGY*  
Pradhan, S. S., Salinas, K., Garduno, A. C., Johansson, J. U., Wang, Q., Manning-Bog, A., Andreasson, K. I.  
2017; 12 (2): 292-304
  - **Prostaglandin E receptor-4 receptor mediates endothelial barrier-enhancing and anti-inflammatory effects of oxidized phospholipids.** *FASEB journal*  
Oskolkova, O., Gawlak, G., Tian, Y., Ke, Y., Sarich, N., Son, S., Andreasson, K., Bochkov, V. N., Birukova, A. A., Birukov, K. G.  
2017
  - **Regulation of lung endothelial permeability and inflammatory responses by prostaglandin A2: role of EP4 receptor.** *Molecular biology of the cell*  
Ohmura, T., Tian, Y., Sarich, N., Ke, Y., Meliton, A., Shah, A. S., Andreasson, K., Birukov, K. G., Birukova, A. A.  
2017
  - **Gpr124 is essential for blood-brain barrier integrity in central nervous system disease** *NATURE MEDICINE*  
Chang, J., Mancuso, M. R., Maier, C., Liang, X., Yuki, K., Yang, L., Kwong, J. W., Wang, J., Rao, V., Vallon, M., Kosinski, C., Zhang, J. J., Mah, et al  
2017; 23 (4): 450-?

- **DEVELOPMENT AND EVALUATION OF A NEW HIGHLY SPECIFIC TREM1-SPECIFIC PET TRACER FOR IMAGING MALADAPTIVE INFLAMMATION**  
Johnson, E. M., Mayer, A., Wang, Q., Tsai, C., Mehta, S., Habte, B., Ilovich, O., Massoud, T. F., Andreasson, K. I., James, M. L.  
WILEY.2017: 15
- **Anti-Inflammatory and Neuroprotective Effects of PGE2 EP4 Signaling in Models of Parkinson's Disease.** *Journal of neuroimmune pharmacology*  
Pradhan, S. S., Salinas, K., Garduno, A. C., Johansson, J. U., Wang, Q., Manning-Bog, A., Andreasson, K. I.  
2016: -?
- **Myeloid Cell Prostaglandin E-2 Receptor EP4 Modulates Cytokine Production but Not Atherogenesis in a Mouse Model of Type 1 Diabetes** *PLOS ONE*  
Vallerie, S. N., Kramer, F., Barnhart, S., Kanter, J. E., Breyer, R. M., Andreasson, K. I., Bornfeldt, K. E.  
2016; 11 (6)
- **Untangling the Web: Toxic and Protective Effects of Neuroinflammation and PGE(2) Signaling in Alzheimer's Disease** *ACS CHEMICAL NEUROSCIENCE*  
Woodling, N. S., Andreasson, K. I.  
2016; 7 (4): 454-463
- **Microarray analysis of the in vivo response of microglia to A $\beta$  peptides in mice with conditional deletion of the prostaglandin EP2 receptor.** *Genomics data*  
Johansson, J. U., Woodling, N. S., Brown, H. D., Wang, Q., Andreasson, K. I.  
2015; 5: 268-271
- **Signaling in Models of Alzheimer's Disease.** *Current immunology reviews*  
Johansson, J. U., Woodling, N. S., Shi, J., Andreasson, K. I.  
2015; 11 (2): 125-131
- **Through-skull fluorescence imaging of the brain in a new near-infrared window** *NATURE PHOTONICS*  
Hong, G., Diao, S., Chang, J., Antaris, A. L., Chen, C., Zhang, B., Zhao, S., Atochin, D. N., Huang, P. L., Andreasson, K. I., Kuo, C. J., Dai, H.  
2014; 8 (9): 723-730
- **Through-skull fluorescence imaging of the brain in a new near-infrared window.** *Nature photonics*  
Hong, G., Diao, S., Chang, J., Antaris, A. L., Chen, C., Zhang, B., Zhao, S., Atochin, D. N., Huang, P. L., Andreasson, K. I., Kuo, C. J., Dai, H.  
2014; 8 (9): 723-730
- **Protection by vascular prostaglandin E-2 signaling in hypoxic-ischemic encephalopathy** *EXPERIMENTAL NEUROLOGY*  
Taniguchi, H., Anacker, C., Wang, Q., Andreasson, K.  
2014; 255: 30-37
- **Suppression of Alzheimer-Associated Inflammation by Microglial Prostaglandin-E-2 EP4 Receptor Signaling** *JOURNAL OF NEUROSCIENCE*  
Woodling, N. S., Wang, Q., Priyam, P. G., Larkin, P., Shi, J., Johansson, J. U., Zagol-Ikapitte, I., Boutaud, O., Andreasson, K. I.  
2014; 34 (17): 5882-5894
- **Suppression of Inflammation with Conditional Deletion of the Prostaglandin E-2 EP2 Receptor in Macrophages and Brain Microglia** *JOURNAL OF NEUROSCIENCE*  
Johansson, J. U., Pradhan, S., Lokteva, L. A., Woodling, N. S., Ko, N., Brown, H. D., Wang, Q., Loh, C., Cekanaviciute, E., Buckwalter, M., Manning-Bog, A. B., Andreasson, K. I.  
2013; 33 (40): 16016-16032
- **Commentary: Progressive inflammation as a contributing factor to early development of Parkinson's disease.** *Experimental neurology*  
Pradhan, S., Andreasson, K.  
2013; 241: 148-155
- **Investigating the role of prostaglandin E2 mediated neuroinflammation in models of Parkinsonism** *11th International Congress of Neuroimmunology (ISNI)*  
Pradhan, S., Johansson, J., Wang, Q., Ko, N., Manning-Bog, A., Andreasson, K.  
ELSEVIER SCIENCE BV.2012: 111-12

- **Inflammatory prostaglandin E2 signaling in a mouse model of Alzheimer disease** *ANNALS OF NEUROLOGY*  
Shi, J., Wang, Q., Johansson, J. U., Liang, X., Woodling, N. S., Priyam, P., Loui, T. M., Merchant, M., Breyer, R. M., Montine, T. J., Andreasson, K.  
2012; 72 (5): 788-798
- **Reversal of Paralysis and Reduced Inflammation from Peripheral Administration of beta-Amyloid in T(H)1 and T(H)17 Versions of Experimental Autoimmune Encephalomyelitis** *SCIENCE TRANSLATIONAL MEDICINE*  
Grant, J. L., Ghosn, E. E., Axtell, R. C., Herges, K., Kuipers, H. F., Woodling, N. S., Andreasson, K., Herzenberg, L. A., Herzenberg, L. A., Steinman, L.  
2012; 4 (145)
- **Signaling via the prostaglandin E-2 receptor EP4 exerts neuronal and vascular protection in a mouse model of cerebral ischemia** *JOURNAL OF CLINICAL INVESTIGATION*  
Liang, X., Lin, L., Woodling, N. S., Wang, Q., Anacker, C., Pan, T., Merchant, M., Andreasson, K.  
2011; 121 (11): 4362-4371
- **Function of prostaglandin E-2 EP receptors in the acute outcome of rodent hypoxic ischemic encephalopathy** *NEUROSCIENCE LETTERS*  
Taniguchi, H., Anacker, C., Suarez-Mier, G. B., Wang, Q., Andreasson, K.  
2011; 504 (3): 185-190
- **Amyloid beta protein-induced zinc sequestration leads to synaptic loss via dysregulation of the ProSAP2/Shank3 scaffold** *MOLECULAR NEURODEGENERATION*  
Grabrucker, A. M., Schmeisser, M. J., Udvardi, P. T., Arons, M., Schoen, M., Woodling, N. S., Andreasson, K. I., Hof, P. R., Buxbaum, J. D., Garner, C. C., Boeckers, T. M.  
2011; 6
- **The Prostaglandin E-2 E-Prostanoid 4 Receptor Exerts Anti-Inflammatory Effects in Brain Innate Immunity** *JOURNAL OF IMMUNOLOGY*  
Shi, J., Johansson, J., Woodling, N. S., Wang, Q., Montine, T. J., Andreasson, K.  
2010; 184 (12): 7207-7218
- **Prostaglandin signalling in cerebral ischaemia** *BRITISH JOURNAL OF PHARMACOLOGY*  
Andreasson, K.  
2010; 160 (4): 844-846
- **Emerging roles of PGE(2) receptors in models of neurological disease** *PROSTAGLANDINS & OTHER LIPID MEDIATORS*  
Andreasson, K.  
2010; 91 (3-4): 104-112
- **The organotypic hippocampal slice culture model for examining neuronal injury.** *Journal of visualized experiments : JoVE*  
Wang, Q., Andreasson, K.  
2010
- **Prostaglandin E-2-EP4 receptor agonist protects neonatal brain from hypoxia-ischemia**  
Taniguchi, H., Anacker, C., Liang, X., Wang, Q., Sabar, F., Andreasson, K.  
NATURE PUBLISHING GROUP.2009: S541
- **Impaired cognition, sensorimotor gating, and hippocampal long-term depression in mice lacking the prostaglandin E2 EP2 receptor** *EXPERIMENTAL NEUROLOGY*  
Savonenko, A., Munoz, P., Melnikova, T., Wang, Q., Liang, X., Breyer, R. M., Montine, T. J., Kirkwood, A., Andreasson, K.  
2009; 217 (1): 63-73
- **Small Molecule, Non-Peptide p75(NTR) Ligands Inhibit A beta-Induced Neurodegeneration and Synaptic Impairment** *PLOS ONE*  
Yang, T., Knowles, J. K., Lu, Q., Zhang, H., Arancio, O., Moore, L. A., Chang, T., Wang, Q., Andreasson, K., Rajadas, J., Fuller, G. G., Xie, Y., Massa, et al  
2008; 3 (11)
- **The prostaglandin E-2 EP2 receptor accelerates disease progression and inflammation in a model of amyotrophic lateral sclerosis** *ANNALS OF NEUROLOGY*  
Liang, X., Wang, Q., Shi, J., Lokteva, L., Breyer, R. M., Montine, T. J., Andreasson, K.  
2008; 64 (3): 304-314
- **Misoprostol, an anti-ulcer agent and PGE(2) receptor agonist, protects against cerebral ischemia** *NEUROSCIENCE LETTERS*



- Li, J., Liang, X., Wang, Q., Breyer, R. M., McCullough, L., Andreasson, K.  
2008; 438 (2): 210-215
- **COX-2 oxidative metabolism of endocannabinoids augments hippocampal synaptic plasticity** *MOLECULAR AND CELLULAR NEUROSCIENCE*  
Yang, H., Zhang, J., Andreasson, K., Chen, C.  
2008; 37 (4): 682-695
  - **Function of prostaglandin receptors in models of neurological disease**  
Andreasson, K. I.  
BLACKWELL PUBLISHING.2008: 12–13
  - **The hypoxic-ischemic encephalopathy model of perinatal ischemia.** *Journal of visualized experiments : JoVE*  
Taniguchi, H., Andreasson, K.  
2008
  - **Divergent effects of prostaglandin receptor signaling on neuronal survival** *NEUROSCIENCE LETTERS*  
Wu, L., Wang, Q., Liang, X., Andreasson, K.  
2007; 421 (3): 253-258
  - **Function of COX-2 and prostaglandins in neurological disease** *International Workshop on Brain Uptake and Utilization of Fatty Acids, Lipids and Lipoproteins*  
Liang, X., Wu, L., Wang, Q., Hand, T., Bilak, M., McCullough, L., Andreasson, K.  
HUMANA PRESS INC.2007: 94–99
  - **Trial of celecoxib in amyotrophic lateral sclerosis** *ANNALS OF NEUROLOGY*  
Cudkowicz, M. E., Shefner, J. M., Schoenfeld, D. A., Zhang, H., Andreasson, K. I., Rothstein, J. D., Drachman, D. B.  
2006; 60 (1): 22-31
  - **Cyclooxygenase-2 activity promotes cognitive deficits but not increased amyloid burden in a model of Alzheimer's disease in a sex-dimorphic pattern** *NEUROSCIENCE*  
Melnikova, T., Savonenko, A., Wang, Q., Liang, X., Hand, T., Wu, L., Kaufmann, W. E., Vehmas, A., Andreasson, K. I.  
2006; 141 (3): 1149-1162
  - **Deletion of the prostaglandin E-2 EP2 receptor reduces oxidative damage and amyloid burden in a model of Alzheimer's disease** *JOURNAL OF NEUROSCIENCE*  
Liang, X. B., Wang, Q., Hand, T., Wu, L. J., Breyer, R. M., Montine, T. J., Andreasson, K.  
2005; 25 (44): 10180-10187
  - **Sex differences in cell death** *ANNALS OF NEUROLOGY*  
Li, H., Pin, S., Zeng, Z. Y., Wang, M. M., Andreasson, K. A., McCullough, L. D.  
2005; 58 (2): 317-321
  - **Prostaglandin H-2-derived adducts of proteins correlate with Alzheimer's disease severity** *JOURNAL OF NEUROCHEMISTRY*  
Zagol-Ikapitte, I., Masterson, T. S., Amarnath, V., Montine, T. J., Andreasson, K. I., Boutaud, O., Oates, J. A.  
2005; 94 (4): 1140-1145
  - **Neuroprotection by the PGE(2) EP2 receptor in permanent focal cerebral ischemia** *ANNALS OF NEUROLOGY*  
Liu, D., Wu, L. J., Breyer, R., Mattson, M. P., Andreasson, K.  
2005; 57 (5): 758-761
  - **Cyclooxygenase-dependent lipid-modification of brain proteins** *BRAIN PATHOLOGY*  
Boutaud, O., Andreasson, K. I., Zagol-Ikapitte, I., Oates, J.  
2005; 15 (2): 139-142
  - **Prostaglandin D-2 mediates neuronal protection via the DP1 receptor** *JOURNAL OF NEUROCHEMISTRY*  
Liang, X. B., Wu, L. J., Hand, T., Andreasson, K.  
2005; 92 (3): 477-486
  - **PGE(2) receptors rescue motor neurons in a model of amyotrophic lateral sclerosis** *ANNALS OF NEUROLOGY*  
Bilak, M., Wu, L. J., Wang, Q., Haughey, N., Conant, K., Hillaire, C. S., Andreasson, K.

2004; 56 (2): 240-248

- **Neuroprotective function of the PGE(2) EP2 receptor in cerebral ischemia** *JOURNAL OF NEUROSCIENCE*  
McCullough, L., Wu, L. J., Haughey, N., Liang, X. B., Hand, T., Wang, Q., Breyer, R. M., Andreasson, K.  
2004; 24 (1): 257-268
- **Neuronal overexpression of cyclooxygenase-2 increases cerebral infarction** *31st Annual Meeting of the Society-for-Neuroscience*  
Dore, S., Otsuka, T., Mito, T., Sugo, N., Hand, T., Wu, L. J., Hurn, P. D., Traystman, R. J., Andreasson, K.  
WILEY-LISS.2003: 155-62
- **Neuronal overexpression of COX-2 results in dominant production of PGE(2) and altered fever response** *NEUROMOLECULAR MEDICINE*  
Vidensky, S., Zhang, Y., Hand, T., Goellner, J., Shaffer, A., Isakson, P., Andreasson, K.  
2003; 3 (1): 15-27
- **Role of immediate early gene expression in cortical morphogenesis and plasticity.** *Results and problems in cell differentiation*  
Andreasson, K. I., Kaufmann, W. E.  
2002; 39: 113-137
- **Age-dependent cognitive deficits and neuronal apoptosis in cyclooxygenase-2 transgenic mice** *JOURNAL OF NEUROSCIENCE*  
Andreasson, K. I., Savonenko, A., Vidensky, S., Goellner, J. J., Zhang, Y., Shaffer, A., Kaufmann, W. E., Worley, P. F., Isakson, P., Markowska, A. L.  
2001; 21 (20): 8198-8209
- **Arcadlin is a neural activity-regulated cadherin involved in long term potentiation** *JOURNAL OF BIOLOGICAL CHEMISTRY*  
Yamagata, K., Andreasson, K. I., Sugiura, H., Maru, E., Dominique, M., Irie, Y., Miki, N., Hayashi, Y., Yoshioka, M., Kaneko, K., Kato, H., Worley, P. F.  
1999; 274 (27): 19473-19479
- **Cyclooxygenases and the central nervous system** *PROSTAGLANDINS & OTHER LIPID MEDIATORS*  
Kaufmann, W. E., Andreasson, K. L., Isakson, P. C., Worley, P. F.  
1997; 54 (3): 601-624
- **A large family of putative transmembrane receptors homologous to the product of the Drosophila tissue polarity gene frizzled** *JOURNAL OF BIOLOGICAL CHEMISTRY*  
Wang, Y. S., Macke, J. P., Abella, B. S., Andreasson, K., Worley, P., Gilbert, D. J., Copeland, N. G., Jenkins, N. A., Nathans, J.  
1996; 271 (8): 4468-4476
- **INDUCTION OF BETA-A ACTIVIN EXPRESSION BY SYNAPTIC ACTIVITY AND DURING NEOCORTICAL DEVELOPMENT** *NEUROSCIENCE*  
Andreasson, K., Worley, P. F.  
1995; 69 (3): 781-796
- **LTP SATURATION AND SPATIAL-LEARNING DISRUPTION - EFFECTS OF TASK VARIABLES AND SATURATION LEVELS** *JOURNAL OF NEUROSCIENCE*  
Barnes, C. A., Jung, M. W., McNaughton, B. L., Korol, D. L., Andreasson, K., Worley, P. F.  
1994; 14 (10): 5793-5806
- **Egr3/Pilot, a zinc finger transcription factor, is rapidly regulated by activity in brain neurons and colocalizes with Egr1/zif268.** *Learning & memory*  
Yamagata, K., Kaufmann, W. E., Lanahan, A., Papapavlou, M., Barnes, C. A., Andreasson, K. I., Worley, P. F.  
1994; 1 (2): 140-152
- **RAPID RESPONSE GENES AS MARKERS OF CELLULAR SIGNALING DURING CORTICAL HISTOGENESIS - THEIR POTENTIAL IN UNDERSTANDING MENTAL-RETARDATION** *INTERNATIONAL JOURNAL OF DEVELOPMENTAL NEUROSCIENCE*  
Kaufmann, W. E., Yamagata, K., Andreasson, K. I., Worley, P. F.  
1994; 12 (4): 263-271
- **EXPRESSION OF A MITOGEN-INDUCIBLE CYCLOOXYGENASE IN BRAIN NEURONS - REGULATION BY SYNAPTIC ACTIVITY AND GLUCOCORTICOIDS** *NEURON*  
Yamagata, K., Andreasson, K. I., Kaufmann, W. E., Barnes, C. A., Worley, P. F.  
1993; 11 (2): 371-386