Stanford



Kathleen Montine

Sr. Research Scientist-Basic Life, Pathology - Montine Lab

Bio

BIO

Dr. Montine is a Senior Research Scientist interested in cognitive impairment in Alzheimer's disease-related dementias, particularly Parkinson's disease dementia (PDD). Prior to working at Stanford, she was at the University of Washington from 2002-2016 and Vanderbilt University from 1995-2002.

ACADEMIC APPOINTMENTS

- Sr. Research Scientist-Basic Life, Pathology - Montine Lab

PROFESSIONAL EDUCATION

- ELS, Board of Editors in the Life Sciences (BELS) , Board Certification as Editor in the Life Sciences (2011)
- PhD, University of Rochester , Biochemistry (1988)
- BS, University of Notre Dame , Biology (1983)

Publications

PUBLICATIONS

- **Cd47 deficiency in mouse brain under excitotoxic stress.** *PLoS computational biology*
  Kiamari, M., Perna, A., Santoro, M., El Ariss, A., Berson, E., Zhao, J., Gajera, C. R., Fox, E. J., Montine, K. S., Aghaeepour, N., Montine, T. J.
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- **The new normal: Simultaneous temporal increases in workload and physician well-being experienced by Stanford pathology in a transformed work environment.** *Academic pathology*
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- **APOE4 Drives Uniquely Dysfunctional Human Microglial States in Alzheimer's Disease.** *bioRxiv : the preprint server for biology*
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- **Potential glutamatergic and GABAergic false neurotransmitters in models of excitation-inhibition imbalance.** *Scientific reports*
  Perna, A., Zhao, J., Gajera, C. R., Schonemann, M., Saw, N. L., Shamloo, M., Montine, K. S., Garofalo, A. W., Montine, T. J.
  2026
- **Epigenomic profile of GBA1 in Parkinson's disease.** *Parkinsonism & related disorders*
  Berson, E., Zaghroun, R., Santoro, M., Bukhari, S., Seong, D., Shu, C. H., Perna, A., James, T., Montine, K. S., Serrano, G. E., Beach, T. G., Keene, C. D., Chang, et al
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- **Deep learning-based cell type profiles reveal signatures of Alzheimer's disease resilience and resistance.** *Brain : a journal of neurology*
  Berson, E., Perna, A., Bukhari, S., Kim, Y., Xue, L., Seong, D., Mataraso, S., Ghanem, M., Chang, A. L., Montine, K. S., Keene, C. D., Kasowski, M., Aghaeepour, et al
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- **Single-cell peripheral immunoprofiling of lewy body and Parkinson's disease in a multi-site cohort.** *Molecular neurodegeneration*
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- **A pathologist-AI collaboration framework for enhancing diagnostic accuracies and efficiencies.** *Nature biomedical engineering*
  Huang, Z., Yang, E., Shen, J., Gratzinger, D., Eyerer, F., Liang, B., Nirschl, J., Bingham, D., Dussaq, A. M., Kunder, C., Rojansky, R., Gilbert, A., Chang-Graham, et al
  2024

- **Intra- and post-pandemic impact of the COVID-19 outbreak on Stanford Health Care.** *Academic pathology*
  Phongpreecha, T., Berson, E., Xue, L., Shome, S., Saarunya, G., Fralick, J., Ruiz-Tagle, B. G., Foody, A., Chin, A. L., Lim, M., Arthofer, R., Albini, C., Montine, et al
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- **Guidance for a Career in an Academic Medical Center.** *Journal of graduate medical education*
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- **Understanding the molecular basis of resilience to Alzheimer's disease.** *Frontiers in neuroscience*
  Montine, K. S., Berson, E., Phongpreecha, T., Huang, Z., Aghaeepour, N., Zou, J. Y., MacCoss, M. J., Montine, T. J.
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- **Quantitative estimate of cognitive resilience and its medical and genetic associations.** *Alzheimer's research & therapy*
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- **Paradigm Shift: Multiple Potential Pathways to Neurodegenerative Dementia.** *Neurotherapeutics : the journal of the American Society for Experimental NeuroTherapeutics*
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- **Cross-species comparative analysis of single presynapses.** *Scientific reports*
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- **Brain proteomic analysis implicates actin filament processes and injury response in resilience to Alzheimer's disease.** *Nature communications*
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- **Single-cell spatial proteomic imaging for human neuropathology.** *Acta neuropathologica communications*
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- **Parkinson's Progression Markers Initiative brain autopsy program.** *Parkinsonism & related disorders*
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- **Mass Synaptometry: Applying Mass Cytometry to Single Synapse Analysis.** *Methods in molecular biology (Clifton, N.J.)*
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- **Single-synapse analyses of Alzheimer's disease implicate pathologic tau, DJ1, CD47, and ApoE.** *Science advances*
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- **Mass-tag barcoding for multiplexed analysis of human synaptosomes and other anuclear events.** *Cytometry. Part A : the journal of the International Society for Analytical Cytology*
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- **TDP-43 Neuropathologic Associations in the Nun Study and the Honolulu-Asia Aging Study** *JOURNAL OF ALZHEIMERS DISEASE*
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- **Resistance to Alzheimer Disease Neuropathologic Changes and Apparent Cognitive Resilience in the Nun and Honolulu-Asia Aging Studies.** *Journal of neuropathology and experimental neurology*
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- **Human Striatal Dopaminergic and Regional Serotonergic Synaptic Degeneration with Lewy Body Disease and Inheritance of APOE e4.** *American journal of pathology*
  Postupna, N., Latimer, C. S., Larson, E. B., Sherfield, E., Paladin, J., Shively, C. A., Jorgensen, M. J., Andrews, R. N., Kaplan, J. R., Crane, P. K., Montine, K. S., Craft, S., Keene, et al
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- **Performance of a Condensed Protocol That Reduces Effort and Cost of NIA-AA Guidelines for Neuropathologic Assessment of Alzheimer Disease.** *Journal of neuropathology and experimental neurology*
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- **An improved ATAC-seq protocol reduces background and enables interrogation of frozen tissues.** *Nature methods*
  Corces, M. R., Trevino, A. E., Hamilton, E. G., Greenside, P. G., Sinnott-Armstrong, N. A., Vesuna, S. n., Satpathy, A. T., Rubin, A. J., Montine, K. S., Wu, B. n., Kathiria, A. n., Cho, S. W., Mumbach, et al
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  Flanagan, M., Larson, E. B., Latimer, C. S., Cholerton, B., Crane, P. K., Montine, K. S., White, L. R., Keene, C., Montine, T. J.
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  White, L. R., Edland, S. D., Hemmy, L. S., Montine, K. S., Zarow, C., Sonnen, J. A., Uyehara-Lock, J. H., Gelber, R. P., Ross, G., Petrovitch, H., Masaki, K. H., Lim, K. O., Launer, et al
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- **Different mechanisms of apolipoprotein E isoform-dependent modulation of prostaglandin E-2 production and triggering receptor expressed on myeloid cells 2 (TREM2) expression after innate immune activation of microglia** *FASEB JOURNAL*
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- **Cognitive Profile of LRRK2-Related Parkinson's Disease** *MOVEMENT DISORDERS*
  Srivatsal, S., Cholerton, B., Leverenz, J. B., Wszolek, Z. K., Uitti, R. J., Dickson, D. W., Weintraub, D., Trojanowski, J. Q., Van Deerlin, V. M., Quinn, J. F., Chung, K. A., Peterson, A. L., Factor, et al
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- **Cerebral Cortical A beta(42) and PHF-tau in 325 Consecutive Brain Autopsies Stratified by Diagnosis, Location, and APOE** *JOURNAL OF NEUROPATHOLOGY AND EXPERIMENTAL NEUROLOGY*
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