



Thomas Montine

Stanford Medicine Pathology Professor

CLINICAL OFFICES

- **Department of Pathology**

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ACADEMIC CONTACT INFORMATION

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Bio

BIO

Dr. Montine received his education at Columbia University (BA in Chemistry), the University of Rochester (PhD in Pharmacology), and McGill University (MD and CM). His postgraduate medical training was at Duke University, and he was junior faculty at Vanderbilt University where he was awarded the Thorne Professorship in Pathology. In 2002, Dr. Montine was appointed as the Alvord Endowed Professor in Neuropathology and Director of the Division of Neuropathology at the University of Washington. He was Director of the University of Washington Alzheimer's Disease Research Center, one of the original 10 Centers in the US, and passed that responsibility to able colleagues. In 2010, Dr. Montine was appointed Chair of the Department of Pathology at the University of Washington. In 2016, Dr. Montine was appointed Chair of the Department of Pathology at Stanford University where he is the Stanford Medicine Endowed Professor in Pathology.

Dr. Montine is the founding Director of the Pacific Udall Center, one of 9 NINDS-funded Morris K. Udall Centers of Excellence for Parkinson's Disease Research. Our center performs basic, translational, and clinical research focused on cognitive impairment in Parkinson's disease. The Pacific Udall Center emphasizes a vision for precision health that comprises functional genomics, development of surveillance tools for pre-clinical detection, and discovery of molecularly tailored therapies.

Dr. Montine is among the top recipients of NIH funding for all Department of Pathology faculty in the United States. He was the 2015 President of the American Association of Neuropathologists, and led or co-led recent NIH initiatives to revise diagnostic guidelines for Alzheimer's disease (NIA), develop research priorities for the National Alzheimer's Plan (NINDS and NIA), and develop research priorities for Parkinson's Disease (NINDS).

The focus of the Montine Laboratory is on the structural and molecular bases of cognitive impairment with the goal of defining key pathogenic steps and thereby new therapeutic targets. The Montine Laboratory addresses these prevalent, unmet medical needs through a combination of neuropathology, biomarker development and application early in the course of disease, and experimental studies that test hypotheses concerning specific mechanisms of neuron injury and approaches to neuroprotection. PubMed lists 579 publications for Dr. Montine. Google Scholar estimates Dr. Montine's citations as > 38,000, his i-10 index as 355, and his H-Index as 98. NIH iCite calculates (1995 to 2017) Dr. Montine's weighted relative citation ratio as 2041.

CLINICAL FOCUS

- Neuropathology

ACADEMIC APPOINTMENTS

- Professor, Pathology
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Department Chair, Stanford University Department of Pathology, (2016- present)

PROFESSIONAL EDUCATION

- Board Certification: Neuropathology, American Board of Pathology (1997)
- Board Certification: Anatomic Pathology, American Board of Pathology (1997)
- Fellowship: Vanderbilt University Medical Center (1996) TN
- Residency: Duke University Hospital (1995) NC
- Residency: Duke University Hospital (1994) NC
- Internship: Duke University Medical Center (1992) NC
- Medical Education: McGill University Faculty of Medicine (1991) Canada

LINKS

- Stanford ADRC: <http://med.stanford.edu/adrc.html>
- Pacific Udall Center: <http://udallcenter.stanford.edu/>
- Montine Lab Site: <https://www.montinelab.com/>

Teaching

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Steven Baker, Vinita Chittoor, Katie Lucot, Marcos Otero-Garcia, Danuta Sastre, Adam Wawro

Postdoctoral Research Mentor

Robert Lesniak, Dunja Mrdjen

Publications

PUBLICATIONS

- **TDP-43 Neuropathologic Associations in the Nun Study and the Honolulu-Asia Aging Study.** *Journal of Alzheimer's disease : JAD*
Flanagan, M. E., Cholerton, B., Latimer, C. S., Hemmy, L. S., Edland, S. D., Montine, K. S., White, L. R., Montine, T. J.
2018
- **The Revised National Alzheimer's Coordinating Center's Neuropathology Form-Available Data and New Analyses** *JOURNAL OF NEUROPATHOLOGY AND EXPERIMENTAL NEUROLOGY*
Besser, L. M., Kukull, W. A., Teylan, M. A., Bigio, E. H., Cairns, N. J., Kofler, J. K., Montine, T. J., Schneider, J. A., Nelson, P. T.
2018; 77 (8): 717–26
- **Sex-Specific Association of Apolipoprotein E With Cerebrospinal Fluid Levels of Tau** *JAMA NEUROLOGY*
Hohman, T. J., Dumitrescu, L., Barnes, L. L., Thambisetty, M., Beecham, G., Kunkle, B., Gifford, K. A., Bush, W. S., Chibnik, L. B., Mukherjee, S., De Jager, P. L., Kukull, W., Crane, et al

2018; 75 (8): 989–98

- **Associations of APOE in the Honolulu Asia Aging Study**
Flanagan, M., Edland, S., Hemmy, L., Cholerton, B., Montine, T., White, L.
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- **Neuropathologic Associations of APOE in the Nun Study**
Flanagan, M., Edland, S., Hemmy, L., Meints, J., Cholerton, B., Lim, K., Montine, T., White, L.
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- **The National Institute on Aging and the Alzheimer's Association Research Framework for Alzheimer's disease: Perspectives from the Research Roundtable** *ALZHEIMERS & DEMENTIA*
Knopman, D. S., Haeblerlein, S., Carrillo, M. C., Hendrix, J. A., Kerchner, G., Margolin, R., Maruff, P., Miller, D. S., Tong, G., Tome, M. B., Murray, M. E., Nelson, P. T., Sano, et al
2018; 14 (4): 563–75
- **NIA-AA Research Framework: Toward a biological definition of Alzheimer's disease** *ALZHEIMERS & DEMENTIA*
Jack, C. R., Bennett, D. A., Blennow, K., Carrillo, M. C., Dunn, B., Haeblerlein, S., Holtzman, D. M., Jagust, W., Jessen, F., Karlawish, J., Liu, E., Luis Molinuevo, J., Montine, et al
2018; 14 (4): 535–62
- **Sex differences in progression to mild cognitive impairment and dementia in Parkinson's disease.** *Parkinsonism & related disorders*
Cholerton, B., Johnson, C. O., Fish, B., Quinn, J. F., Chung, K. A., Peterson-Hiller, A. L., Rosenthal, L. S., Dawson, T. M., Albert, M. S., Hu, S., Mata, I. F., Leverenz, J. B., Poston, et al
2018
- **Application of the condensed protocol for the NIA-AA guidelines for the neuropathological assessment of Alzheimer's disease in an academic clinical practice** *HISTOPATHOLOGY*
Bharadwaj, R., Cimino, P. J., Flanagan, M. E., Latimer, C. S., Gonzalez-Cuyar, L. F., Juric-Sekhar, G., Montine, T. J., Marshall, D. A., Keene, C.
2018; 72 (3): 433–40
- **Associations between Use of Specific Analgesics and Concentrations of Amyloid-beta 42 or Phospho-Tau in Regions of Human Cerebral Cortex** *JOURNAL OF ALZHEIMERS DISEASE*
Flanagan, M. E., Larson, E. B., Walker, R. L., Keene, C., Postupna, N., Cholerton, B., Sonnen, J. A., Dublin, S., Crane, P. K., Montine, T. J.
2018; 61 (2): 653–62
- **Exposure to Strong Anticholinergic Medications and Dementia-Related Neuropathology in a Community-Based Autopsy Cohort** *JOURNAL OF ALZHEIMERS DISEASE*
Gray, S. L., Anderson, M. L., Hanlon, J. T., Dublin, S., Walker, R. L., Hubbard, R. A., Yu, O., Montine, T. J., Crane, P. K., Sonnen, J. A., Keene, C., Larson, E. B.
2018; 65 (2): 607–16
- **Alzheimer's Disease Sequencing Project discovery and replication criteria for cases and controls: Data from a community-based prospective cohort study with autopsy follow-up** *ALZHEIMERS & DEMENTIA*
Crane, P. K., Foroud, T., Montine, T. J., Larson, E. B.
2017; 13 (12): 1410–13
- **Homocysteine and cognitive function in Parkinson's disease** *PARKINSONISM & RELATED DISORDERS*
Licking, N., Murchison, C., Cholerton, B., Zabetian, C. P., Hu, S., Montine, T. J., Peterson-Hiller, A. L., Chung, K. A., Edwards, K., Leverenz, J. B., Quinn, J. F.
2017; 44: 1–5
- **Traumatic brain injury may not increase the risk of Alzheimer disease** *NEUROLOGY*
Weiner, M. W., Crane, P. K., Montine, T. J., Bennett, D. A., Veitch, D. P.
2017; 89 (18): 1923–25
- **Systems biology approach to late-onset Alzheimer's disease genome-wide association study identifies novel candidate genes validated using brain expression data and Caenorhabditis elegans experiments** *ALZHEIMERS & DEMENTIA*
Mukherjee, S., Russell, J. C., Carr, D. T., Burgess, J. D., Allen, M., Serie, D. J., Boehme, K. L., Kauwe, J. K., Naj, A. C., Fardo, D. W., Dickson, D. W., Montine, T. J., Ertekin-Taner, et al
2017; 13 (10): 1133–42
- **Resistance to Alzheimer Disease Neuropathologic Changes and Apparent Cognitive Resilience in the Nun and Honolulu-Asia Aging Studies.** *Journal of neuropathology and experimental neurology*

- Latimer, C. S., Keene, C. D., Flanagan, M. E., Hemmy, L. S., Lim, K. O., White, L. R., Montine, K. S., Montine, T. J.
2017; 76 (6): 458-466
- **Total Brain and Hippocampal Volumes and Cognition in Older American Indians: The Strong Heart Study** *ALZHEIMER DISEASE & ASSOCIATED DISORDERS*
Cholerton, B., Omidpanah, A., Madhyastha, T. M., Grabowski, T. J., Suchy-Dicey, A. M., Shibata, D. K., Nelson, L. A., Verney, S. P., Howard, B. V., Longstreth, W. T., Montine, T. J., Buchwald, D.
2017; 31 (2): 94-100
 - **Regulatory region genetic variation is associated with FYN expression in Alzheimer's disease.** *Neurobiology of aging*
Zahratka, J. A., Shao, Y., Shaw, M., Todd, K., Formica, S. V., Khrestian, M., Montine, T., Leverenz, J. B., Bekris, L. M.
2017; 51: 43-53
 - **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
2017
 - **Transethnic genome-wide scan identifies novel Alzheimer's disease loci.** *Alzheimer's & dementia : the journal of the Alzheimer's Association*
Jun, G. R., Chung, J., Mez, J., Barber, R., Beecham, G. W., Bennett, D. A., Buxbaum, J. D., Byrd, G. S., Carrasquillo, M. M., Crane, P. K., Cruchaga, C., De Jager, P., Ertekin-Taner, et al
2017
 - **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*
Flanagan, M. E., Marshall, D. A., Shofer, J. B., Montine, K. S., Nelson, P. T., Montine, T. J., Keene, C. D.
2017
 - **Neuropathological and genetic correlates of survival and dementia onset in synucleinopathies: a retrospective analysis** *LANCET NEUROLOGY*
Irwin, D., Grossman, M., Weintraub, D., Hurtig, H. I., Duda, J. E., Xie, S. X., Lee, E. B., Van Deerlin, V. M., Lopez, O. L., Kofler, J. K., Nelson, P. T., Jicha, G. A., Woltjer, et al
2017; 16 (1): 55-65
 - **Neuropathological Comparison of Adult Onset and Juvenile Huntington's Disease with Cerebellar Atrophy: A Report of a Father and Son** *JOURNAL OF HUNTINGTONS DISEASE*
Latimer, C. S., Flanagan, M. E., Cimino, P. J., Jayadev, S., Davis, M., Hoffer, Z. S., Montine, T. J., Gonzalez-Cuyar, L. F., Bird, T. D., Keene, C.
2017; 6 (4): 337-48
 - **Effects of Regular and Long-Acting Insulin on Cognition and Alzheimer's Disease Biomarkers: A Pilot Clinical Trial** *JOURNAL OF ALZHEIMERS DISEASE*
Craft, S., Claxton, A., Baker, L. D., Hanson, A. J., Cholerton, B., Trittschuh, E. H., Dahl, D., Caulder, E., Neth, B., Montine, T. J., Jung, Y., Maldjian, J., Whitlow, et al
2017; 57 (4): 1325-1334
 - **Use of Analgesics (Opioids and Nonsteroidal Anti-Inflammatory Drugs) and Dementia-Related Neuropathology in a Community-Based Autopsy Cohort.** *Journal of Alzheimer's disease : JAD*
Dublin, S., Walker, R. L., Gray, S. L., Hubbard, R. A., Anderson, M. L., Yu, O., Montine, T. J., Crane, P. K., Sonnen, J. A., Larson, E. B.
2017; 58 (2): 435-448
 - **Type 2 Diabetes, Cognition, and Dementia in Older Adults: Toward a Precision Health Approach.** *Diabetes spectrum : a publication of the American Diabetes Association*
Cholerton, B., Baker, L. D., Montine, T. J., Craft, S.
2016; 29 (4): 210-219
 - **Global, regional, and national life expectancy, all-cause mortality, and cause-specific mortality for 249 causes of death, 1980-2015: a systematic analysis for the Global Burden of Disease Study 2015** *LANCET*
Wang, H., Naghavi, M., Allen, C., Barber, R. M., Bhutta, Z. A., Carter, A., Casey, D. C., Charlson, F. J., Chen, A. Z., Coates, M. M., Coggeshall, M., Dandona, L., Dicker, et al
2016; 388 (10053): 1459-1544
 - **The phosphatase calcineurin regulates pathological TDP-43 phosphorylation.** *Acta neuropathologica*

- Liachko, N. F., Saxton, A. D., McMillan, P. J., Strovass, T. J., Currey, H. N., Taylor, L. M., Wheeler, J. M., Oblak, A. L., Ghetti, B., Montine, T. J., Keene, C. D., Raskind, M. A., Bird, et al
2016; 132 (4): 545-561
- **Association of Traumatic Brain Injury With Late-Life Neurodegenerative Conditions and Neuropathologic Findings.** *JAMA neurology*
Crane, P. K., Gibbons, L. E., Dams-O'Connor, K., Trittschuh, E., Leverenz, J. B., Keene, C. D., Sonnen, J., Montine, T. J., Bennett, D. A., Leurgans, S., Schneider, J. A., Larson, E. B.
2016; 73 (9): 1062-1069
 - **Rho-associated protein kinase 1 (ROCK1) is increased in Alzheimer's disease and ROCK1 depletion reduces amyloid- β levels in brain.** *Journal of neurochemistry*
Henderson, B. W., Gentry, E. G., Rush, T., Troncoso, J. C., Thambisetty, M., Montine, T. J., Herskowitz, J. H.
2016; 138 (4): 525-531
 - **Mitochondrial DNA mutations increase in early stage Alzheimer disease and are inconsistent with oxidative damage.** *Annals of neurology*
Hoekstra, J. G., Hipp, M. J., Montine, T. J., Kennedy, S. R.
2016; 80 (2): 301-306
 - **Global, regional, and national disability-adjusted life years (DALYs) for 306 diseases and injuries and healthy life expectancy (HALE) for 188 countries, 1990-2013: quantifying the epidemiological transition** *LANCET*
Murray, C. J., Barber, R. M., Foreman, K. J., Ozgoren, A. A., Abd-Allah, F., Abera, S. F., Aboyans, V., Abraham, J. P., Abubakar, I., Abu-Raddad, L. J., Abu-Rmeileh, N. M., Achoki, T., Ackerman, et al
2015; 386 (10009): 2145-2191
 - **Global, regional, and national incidence, prevalence, and years lived with disability for 301 acute and chronic diseases and injuries in 188 countries, 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013** *LANCET*
Vos, T., Barber, R. M., Bell, B., Bertozzi-Villa, A., Biryukov, S., Bolliger, I., Charlson, F., Davis, A., Degenhardt, L., Dicker, D., Duan, L., Erskine, H., Feigin, et al
2015; 386 (9995): 743-800
 - **Global, regional, and national age-sex specific all-cause and cause-specific mortality for 240 causes of death, 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013** *LANCET*
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2015; 385 (9963): 117-171
 - **Low Plasma Leptin in Cognitively Impaired ADNI Subjects: Gender Differences and Diagnostic and Therapeutic Potential** *CURRENT ALZHEIMER RESEARCH*
Johnston, J. M., Hu, W. T., Fardo, D. W., Greco, S. J., Perry, G., Montine, T. J., Trojanowski, J. Q., Shaw, L. M., Ashford, J. W., Tezapsidis, N.
2014; 11 (2): 165-174
 - **The future of blood-based biomarkers for Alzheimer's disease** *ALZHEIMERS & DEMENTIA*
Henriksen, K., O'Bryant, S. E., Hamper, H., Trojanowski, J. Q., Montine, T. J., Jeromin, A., Blennow, K., Lonneborg, A., Wyss-Coray, T., Soares, H., Bazenet, C., Sjogren, M., Hu, et al
2014; 10 (1): 115-131
 - **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
 - **Mutations in Prickle Orthologs Cause Seizures in Flies, Mice, and Humans** *AMERICAN JOURNAL OF HUMAN GENETICS*
Tao, H., Manak, J. R., Sowers, L., Mei, X., Kiyonari, H., Abe, T., Dandaleh, N. S., Yang, T., Wu, S., Chen, S., Fox, M. H., Gurnett, C., Montine, et al
2011; 88 (2): 138-149
 - **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
 - **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

- **The prostaglandin E-2 EP2 receptor accelerates disease progression and inflammation in a model of amyotrophic lateral sclerosis** *ANNALS OF NEUROLOGY*

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2008; 64 (3): 304-314