Stanford



Jack Tzu-Chieh Wang, MD, PhD

Adjunct Clinical Assistant Professor, Adult Neurology

CLINICAL OFFICE (PRIMARY)

- **Stanford Neurocritical Care Program**
  453 Quarry Rd Ste 245
  MC 5327
  Palo Alto, CA 94304
  Tel (650) 723-2606 **Fax** (650) 723-4451

ACADEMIC CONTACT INFORMATION

- **Administrative Contact**
  Valerie Berland - Administrative Associate
  Email vberland@stanford.edu
  Tel (650) 723-2606

Bio

BIO

Dr. Wang is a board-certified, fellowship-trained neurocritical care specialist at Stanford Health Care. He is an Adjunct Clinical Assistant Professor in the Department of Neurology & Neurological Sciences at Stanford University School of Medicine. He also serves as Medical Director of Clinical Development at Denali Therapeutics, a biotechnology company based in South San Francisco.

Dr. Wang's clinical, research, and medical education interests include stroke, traumatic brain and spinal cord injury, and secondary neurodegeneration following acute brain injury. He provides care for critically ill patients with neurological illnesses in the intensive care unit (ICU) at Stanford Hospital and teaches fellows, residents, and medical students how to deliver critical neurological care.

Dr. Wang has received research awards and grants from the National Institutes of Health, the American Heart Association/American Stroke Association, the American Academy of Neurology, and the Alzheimer's Association. He has published in several top peer-reviewed journals, including Proceedings of the National Academy of Sciences, Journal of Cell Biology, and Journal of Neuroscience, and has presented his research at national and international conferences. He also serves as an ad hoc reviewer for a number of publications, including Cell, Neuron, Nature, and Science.

In his role in clinical development, Dr. Wang draws on his expertise in neurological care and translational neuroscience to help advance novel therapies from research into clinical practice, with a focus on improving outcomes for patients with acute and chronic degenerative neurological conditions.

Dr. Wang is a member of the American Academy of Neurology, American Heart Association, Neurocritical Care Society, Society of Critical Care Medicine, and Society for Neuroscience.

CLINICAL FOCUS

- Neurocritical Care

HONORS AND AWARDS

- Clinician Scientist Early Career Award, Alzheimer's Association (2024)
- Career Development Award, American Academy of Neurology (2023)
- Career Development Award, American Heart/Stroke Association (2023)
- NCS Research Fellowship, Neurocritical Care Society (2022-2023)
- StrokeNet Research Fellowship, NINDS (2020-2021)
- Semel Institute Neuroscience Research Award, UCLA-Semel Neuroscience Institute (2018)
- Excellence in Research, Los Angeles Neurological Society (2018)
- R25 Research Training Fellowship, NINDS (2016-2020)
- Bio-X Bowes Fellow, Stanford University School of Medicine (2011-2014)
- Predoctoral Research Fellowship, American Heart/Stroke Association (2009-2011)
- Translational Research Scholar, Adelson Neural Repair & Rehabilitation Foundation (2008-2011)
- Delegate, International Achievement Summit (2007)
- Predoctoral Medical Research Fellowship, Howard Hughes Medical Institute (2005-2007)
- Excellence in Undergraduate Teaching, Stanford University, Department of Biological Sciences (2003)

PROFESSIONAL EDUCATION

- Board Certification: Neurocritical Care, American Board of Psychiatry and Neurology (2021)
- Board Certification: Vascular Neurology, American Board of Psychiatry and Neurology (2020)
- Board Certification: Neurology, American Board of Psychiatry and Neurology (2018)
- Fellowship: Stanford University Neurocritical Care and Stroke Fellowship (2020) CA
- Residency: UCLA Dept of Neurology (2018) CA
- Internship: Kaiser Permanente Santa Clara Internal Medicine Residency (2015) CA
- Medical Education: Stanford University School of Medicine (2014) CA
- PhD, Stanford University School of Medicine , Neuroscience (2014)
- MD, Stanford University School of Medicine , Medicine (2014)

LINKS

- Stanford Healthcare Profile: https://stanfordhealthcare.org/doctors/w/jack-wang.html
- Stanford Neurocritical Care: https://med.stanford.edu/neurology/divisions/neurocriticalcare/team.html

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Our primary research focus is understanding the molecular mechanisms of axonal degeneration and subsequent failure of axonal regeneration in the CNS. We have identified critical cellular pathways mediating axonal degeneration following acute neurological injuries including ischemic stroke and traumatic brain injury. Modulating these pathways presents a novel therapeutic strategy to protect vulnerable nerve fibers and enhance functional recovery in a multitude of acute CNS injuries and diseases.

Teaching

COURSES

2026-27

- Stroke Seminar: NENS 204 (Win)

2025-26

- Stroke Seminar: NENS 204 (Win)

2024-25

- Stroke Seminar: NENS 204 (Win)

2023-24

- Stroke Seminar: NENS 204 (Win)

Publications

PUBLICATIONS

- **Loss of Sarm1 Mitigates Axonal Degeneration and Promotes Neuronal Repair After Ischemic Stroke.** *bioRxiv : the preprint server for biology*
  Wang, J. T., Toh, B., An, J., Komuro, Y., Godoy, M. I., Putman, J., Carmichael, S. T., Damoiseaux, R., Hinman, J. D.
  2025

- **What are the Molecular Mechanisms of Axonal Degeneration in Stroke?**
  Wang, J.
  LIPPINCOTT WILLIAMS & WILKINS.2021

- **Absence of Sarm1 Promotes Axonal and Neuronal Survival after Stroke**
  Wang, J., Toh, B., Komuro, Y., Hinman, J. D.
  WILEY.2019: S240

- **Developmental mechanisms for establishing functional non-image-forming visual circuits**
  Dhande, O. S., Phan, A. H., Seabrook, T. A., Nguyen, P. L., Wang, J. T., Huberman, A.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2017

- **Local axonal protection by WldS as revealed by conditional regulation of protein stability** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Wang, J. T., Medress, Z. A., Vargas, M. E., Barres, B. A.
  2015; 112 (33): 10093-10100

- **Gap junctions are essential for generating the correlated spike activity of neighboring retinal ganglion cells.** *PloS one*
  Völgyi, B., Pan, F., Paul, D. L., Wang, J. T., Huberman, A. D., Bloomfield, S. A.
  2013; 8 (7): e69426

- **Gap Junctions Are Essential for Generating the Correlated Spike Activity of Neighboring Retinal Ganglion Cells** *PLOS ONE*
  Voelgyi, B., Pan, F., Paul, D. L., Wang, J. T., Huberman, A. D., Bloomfield, S. A.
  2013; 8 (7)

- **Culturing hybridoma cell lines for monoclonal antibody production.** *Cold Spring Harbor protocols*
  Winzeler, A., Wang, J. T.
  2013; 2013 (7): 640-642

- **Purification and culture of retinal ganglion cells.** *Cold Spring Harbor protocols*
  Winzeler, A., Wang, J. T.
  2013; 2013 (7): 614-617

- **Purification and culture of retinal ganglion cells from rodents.** *Cold Spring Harbor protocols*

Winzeler, A., Wang, J. T.
2013; 2013 (7): 643-652

- **Axon Degeneration: Where the Wld(s) Things Are** *CURRENT BIOLOGY*
  Wang, J. T., Barres, B. A.
  2012; 22 (7): R221-R223
- **Axon degeneration: Molecular mechanisms of a self-destruction pathway** *JOURNAL OF CELL BIOLOGY*
  Wang, J. T., Medress, Z. A., Barres, B. A.
  2012; 196 (1): 7-18
- **Disease gene candidates revealed by expression profiling of retinal ganglion cell development** *JOURNAL OF NEUROSCIENCE*
  Wang, J. T., Kunzevitzky, N. J., Dugas, J. C., Cameron, M., Barres, B. A., Goldberg, J. L.
  2007; 27 (32): 8593-8603
- **An oligodendrocyte lineage-specific semaphorin, sema5A, inhibits axon growth by retinal ganglion cells** *JOURNAL OF NEUROSCIENCE*
  Goldberg, J. L., Vargas, M. E., Wang, J. T., Mandemakers, W., Oster, S. F., Sretavan, D. W., Barres, B. A.
  2004; 24 (21): 4989-4999

PRESENTATIONS

- Molecular Mechanisms of Wlds and SARM1 Mediated Protection in Stroke - American Academy of Neurology Annual Conference (4/2018)
- What is the Molecular Mechanism of Axon Degeneration in Stroke? - American Society of Neurochemistry Annual Conference (3/2018)