Stanford



Jack Tzu-Chieh Wang, MD, PhD

Instructor, Neurology & Neurological Sciences

CLINICAL OFFICE (PRIMARY)

Stanford Neurosurgery Dept
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. Jack Wang is a physician-scientist and a neurointensivist at Stanford University Medical Center, where he currently cares for critically ill patients with neurological illnesses in the ICU. He has particular clinical and research interests in stroke and traumatic brain injury, and currently leads an active translational effort to identify novel therapeutic targets to promote functional recovery after brain and spinal cord injuries.

CLINICAL FOCUS

Neurocritical Care

ACADEMIC APPOINTMENTS

Instructor, Neurology & Neurological Sciences

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 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

2023-24

• Stroke Seminar: NENS 204 (Win)

2022-23

• Stroke Seminar: NENS 204 (Win)

Publications

PUBLICATIONS

- 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 WIdS 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)