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Jeff Nirschl, M.D., Ph.D. is a neuropathology fellow at Stanford University, Stanford, CA, in the Department of Pathology. He completed his Ph.D. in Neuroscience at the University of Pennsylvania under the supervision of Dr. Erika Holzbaur. During his thesis research, he investigated axonal transport and genetic forms of parkinsonism. He also developed computational image analysis workflows for fluorescence microscopy and digital pathology. His research interests include molecular motors and the neuronal cytoskeleton, the regulation of axonal transport in neurodegeneration, digital pathology, and quantitative image analysis using machine learning.

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Publications

PUBLICATIONS

- **Biological data annotation via a human-augmenting AI-based labeling system.** *NPJ digital medicine*
van der Wal, D., Jhun, I., Lakloul, I., Nirschl, J., Richer, L., Rojansky, R., Theparee, T., Wheeler, J., Sander, J., Feng, F., Mohamad, O., Savarese, S., Socher, et al
2021; 4 (1): 145
- **Creatine transport and pathological changes in creatine transporter deficient mice.** *Journal of inherited metabolic disease*
Wawro, A. M., Gajera, C. R., Baker, S. A., Nirschl, J. J., Vogel, H. n., Montine, T. J.
2021
- **Actin cables and comet tails organize mitochondrial networks in mitosis.** *Nature*
Moore, A. S., Coscia, S. M., Simpson, C. L., Ortega, F. E., Wait, E. C., Heddeleston, J. M., Nirschl, J. J., Obara, C. J., Guedes-Dias, P. n., Boecker, C. A., Chew, T. L., Theriot, J. A., Lippincott-Schwartz, et al
2021
- **In vitro amplification of pathogenic tau conserves disease-specific bioactive characteristics.** *Acta neuropathologica*
Xu, H., O'Reilly, M., Gibbons, G. S., Changolkar, L., McBride, J. D., Riddle, D. M., Zhang, B., Stieber, A., Nirschl, J., Kim, S., Hoxha, K., Brunden, K. R., Schellenberg, et al
2021
- **The development and convergence of co-pathologies in Alzheimer's disease.** *Brain : a journal of neurology*
Robinson, J. L., Richardson, H. n., Xie, S. X., Suh, E. n., Van Deerlin, V. M., Alfaro, B. n., Loh, N. n., Porras-Paniagua, M. n., Nirschl, J. J., Wolk, D. n., Lee, V. M., Lee, E. B., Trojanowski, et al
2020
- **Kinesin-3 Responds to Local Microtubule Dynamics to Target Synaptic Cargo Delivery to the Presynapse.** *Current biology : CB*
Guedes-Dias, P. n., Nirschl, J. J., Abreu, N. n., Tokito, M. K., Janke, C. n., Magiera, M. M., Holzbaur, E. L.
2019; 29 (2): 268–82.e8
- **A deep-learning classifier identifies patients with clinical heart failure using whole-slide images of H&E tissue.** *PLoS one*
Nirschl, J. J., Janowczyk, A. n., Peyster, E. G., Frank, R. n., Margulies, K. B., Feldman, M. D., Madabhushi, A. n.

2018; 13 (4): e0192726

- **Amyotrophic lateral sclerosis-linked mutations increase the viscosity of liquid-like TDP-43 RNP granules in neurons.** *Proceedings of the National Academy of Sciences of the United States of America*
Gopal, P. P., Nirschl, J. J., Klinman, E. n., Holzbaur, E. L.
2017; 114 (12): E2466–E2475
- **Deep Learning Tissue Segmentation in Cardiac Histopathology Images** *DEEP LEARNING FOR MEDICAL IMAGE ANALYSIS*
Nirschl, J. J., Janowczyk, A., Peyster, E. G., Frank, R., Margulies, K. B., Feldman, M. D., Madabhushi, A., Zhou, S. K., Greenspan, H., Shen, D.
2017: 179–95
- **The impact of cytoskeletal organization on the local regulation of neuronal transport.** *Nature reviews. Neuroscience*
Nirschl, J. J., Ghiretti, A. E., Holzbaur, E. L.
2017; 18 (10): 585–97
- **#-Tubulin Tyrosination and CLIP-170 Phosphorylation Regulate the Initiation of Dynein-Driven Transport in Neurons.** *Cell reports*
Nirschl, J. J., Magiera, M. M., Lazarus, J. E., Janke, C. n., Holzbaur, E. L.
2016; 14 (11): 2637–52
- **Live-cell imaging of retrograde transport initiation in primary neurons.** *Methods in cell biology*
Nirschl, J. J., Holzbaur, E. L.
2016; 131: 269–76
- **Lipid Rafts Assemble Dynein Ensembles.** *Trends in biochemical sciences*
Nirschl, J. J., Ghiretti, A. E., Holzbaur, E. L.
2016; 41 (5): 393–94
- **LC3 Binding to the Scaffolding Protein JIP1 Regulates Processive Dynein-Driven Transport of Autophagosomes** *DEVELOPMENTAL CELL*
Fu, M., Nirschl, J. J., Holzbaur, E. L.
2014; 29 (5): 577–590
- **Automated quantification of locomotion, social interaction, and mate preference in Drosophila mutants.** *Journal of neurogenetics*
Iyengar, A., Imoehl, J., Ueda, A., Nirschl, J., Wu, C. F.
2012; 26 (3–4): 306–16