

Stanford



Alexis Thomas Weiner

Postdoctoral Research Fellow, Pathology

 NIH Biosketch available Online

Bio

INSTITUTE AFFILIATIONS

- Member, Maternal & Child Health Research Institute (MCHRI)

HONORS AND AWARDS

- Stanford School of Medicine Dean's Fellowship, Stanford University (2021)
- Penn State Graduate Student Excellence in Mentoring Award, The Pennsylvania State University (2019)
- Nominee for the 2018 Dean's Climate and Diversity Award, The Pennsylvania State University (2018)

PROFESSIONAL EDUCATION

- PhD, The Pennsylvania State University , Molecular, Cellular and Integrative Biosciences (2020)
- BS, The Pennsylvania State University , Biology (2013)

STANFORD ADVISORS

- Jeffrey Axelrod, Postdoctoral Faculty Sponsor

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

The planar cell polarity (PCP) signaling pathway polarizes animal cells along an axis parallel to the tissue plane, and in so doing generates long-range organization that can span entire tissues. Although its core proteins and much about their interactions are known, how PCP signaling occurs at a mechanistic level remains fundamentally mysterious. In my current project I will employ novel genetic methods to dissect the logic underlying how cellular asymmetry arises at a molecular level.

LAB AFFILIATIONS

- Jeffrey Axelrod, Axelrod Lab (1/6/2020)

Publications

PUBLICATIONS

- **Functional assessment of the "two-hit" model for neurodevelopmental defects in *Drosophila* and *X. laevis*.** *PLoS genetics*
Pizzo, L., Lasser, M., Yusuff, T., Jensen, M., Ingraham, P., Huber, E., Singh, M. D., Monahan, C., Iyer, J., Desai, I., Karthikeyan, S., Gould, D. J., Yennawar, et al
2021; 17 (4): e1009112
- **To nucleate or not, that is the question in neurons.** *Neuroscience letters*
Weiner, A. T., Thyagarajan, P., Shen, Y., Rolls, M. M.
2021: 135806

-
- **Trim9 and Klp61F promote polymerization of new dendritic microtubules along parallel microtubules.** *Journal of cell science*
Feng, C. n., Cleary, J. M., Kothe, G. O., Stone, M. C., Weiner, A. T., Hertzler, J. I., Hancock, W. O., Rolls, M. M.
2021
 - **Kinetochore proteins suppress neuronal microtubule dynamics and promote dendrite regeneration** *MOLECULAR BIOLOGY OF THE CELL*
Hertzler, J., Simonovitch, S., Albertson, R. M., Weiner, A. T., Nye, D. R., Rolls, M. M.
2020; 31 (19): 2125–38
 - **The receptor tyrosine kinase Ror is required for dendrite regeneration in Drosophila neurons** *PLOS BIOLOGY*
Nye, D. R., Albertson, R. M., Weiner, A. T., Hertzler, J., Shorey, M., Goberdhan, D. I., Wilson, C., Janes, K. A., Rolls, M. M.
2020; 18 (3): e3000657
 - **Endosomal Wnt signaling proteins control microtubule nucleation in dendrites.** *PLoS biology*
Weiner, A. T., Seebold, D. Y., Torres-Gutierrez, P. n., Folker, C. n., Swope, R. D., Kothe, G. O., Stoltz, J. G., Zalenski, M. K., Kozlowski, C. n., Barbera, D. J., Patel, M. A., Thyagarajan, P. n., Shorey, et al
2020; 18 (3): e3000647
 - **Patronin-mediated minus end growth is required for dendritic microtubule polarity** *JOURNAL OF CELL BIOLOGY*
Feng, C., Thyagarajan, P., Shorey, M., Seebold, D. Y., Weiner, A. T., Albertson, R. M., Rao, K. S., Sagasti, A., Goetschius, D. J., Rolls, M. M.
2019; 218 (7): 2309–28
 - **Pervasive genetic interactions modulate neurodevelopmental defects of the autism-associated 16p11.2 deletion in Drosophila melanogaster** *NATURE COMMUNICATIONS*
Iyer, J., Singh, M., Jensen, M., Patel, P., Pizzo, L., Huber, E., Koerselman, H., Weiner, A. T., Lepanto, P., Vadodaria, K., Kubina, A., Wang, Q., Talbert, et al
2018; 9: 2548
 - **Identification of Proteins Required for Precise Positioning of Apc2 in Dendrites** *G3-GENES GENOMES GENETICS*
Weiner, A. T., Seebold, D. Y., Michael, N. L., Guignet, M., Feng, C., Follick, B., Yusko, B. A., Wasilko, N. P., Torres-Gutierrez, P., Rolls, M. M.
2018; 8 (5): 1841–53
 - **Mitochondria and Caspases Tune Nmnat-Mediated Stabilization to Promote Axon Regeneration** *PLOS GENETICS*
Chen, L., Nye, D. M., Stone, M. C., Weiner, A. T., Gheres, K. W., Xiong, X., Collins, C. A., Rolls, M. M.
2016; 12 (12): e1006503
 - **Spastin, atlastin, and ER relocalization are involved in axon but not dendrite regeneration** *MOLECULAR BIOLOGY OF THE CELL*
Rao, K., Stone, M. C., Weiner, A. T., Gheres, K. W., Zhou, C., Deitcher, D. L., Levitan, E. S., Rolls, M. M.
2016; 27 (21): 3245–56
 - **Kinesin-2 and Apc Function at Dendrite Branch Points to Resolve Microtubule Collisions** *CYTOSKELETON*
Weiner, A. T., Lanz, M. C., Goetschius, D. J., Hancock, W. O., Rolls, M. M.
2016; 73 (1): 35–44
 - **gamma-Tubulin controls neuronal microtubule polarity independently of Golgi outposts** *MOLECULAR BIOLOGY OF THE CELL*
Nguyen, M. M., McCracken, C. J., Milner, E. S., Goetschius, D. J., Weiner, A. T., Long, M. K., Michael, N. L., Munro, S., Rolls, M. M.
2014; 25 (13): 2039–50