

# Stanford

---



## Richard Roth

Postdoctoral Research Fellow, Neurosurgery

---

### Bio

#### PROFESSIONAL EDUCATION

- Bachelor of Science, Technische Universitat Munchen (2011)
- Doctor of Philosophy, Johns Hopkins University (2019)

#### STANFORD ADVISORS

- Jun Ding, Postdoctoral Faculty Sponsor

---

### Publications

#### PUBLICATIONS

- **Cortical Synaptic AMPA Receptor Plasticity during Motor Learning** *NEURON*  
Roth, R. H., Cudmore, R. H., Tan, H. L., Hong, I., Zhang, Y., Hugarir, R. L.  
2020; 105 (5): 895-+
- **Lamina-specific AMPA receptor dynamics following visual deprivation in vivo** *ELIFE*  
Tan, H. L., Roth, R. H., Graves, A. R., Cudmore, R. H., Hugarir, R. L.  
2020; 9
- **An ultrasensitive biosensor for high-resolution kinase activity imaging in awake mice.** *Nature chemical biology*  
Zhang, J. F., Liu, B., Hong, I., Mo, A., Roth, R. H., Tenner, B., Lin, W., Zhang, J. Z., Molina, R. S., Drobizhev, M., Hughes, T. E., Tian, L., Hugarir, et al  
2020
- **Single-fluorophore biosensors for sensitive and multiplexed detection of signalling activities** *NATURE CELL BIOLOGY*  
Mehta, S., Zhang, Y., Roth, R. H., Zhang, J., Mo, A., Tenner, B., Hugarir, R. L., Zhang, J.  
2018; 20 (10): 1215-+
- **Dynamic imaging of AMPA receptor trafficking in vitro and in vivo** *CURRENT OPINION IN NEUROBIOLOGY*  
Roth, R. H., Zhang, Y., Hugarir, R. L.  
2017; 45: 51-58
- **Homer1a drives homeostatic scaling-down of excitatory synapses during sleep** *SCIENCE*  
Diering, G. H., Nirujogi, R. S., Roth, R. H., Worley, P. F., Pandey, A., Hugarir, R. L.  
2017; 355 (6324): 511-+
- **Synaptic Organization of the Neuronal Circuits of the Claustrum** *JOURNAL OF NEUROSCIENCE*  
Kim, J., Matney, C. J., Roth, R. H., Brown, S. P.  
2016; 36 (3): 773-784