Stanford

Chunyang Dong

Postdoctoral Scholar, Psychiatry

Bio

BIO

Chunyang Dong completed his Ph.D. studies from University of California, Davis with Dr. Lin Tian, where he specialized in protein engineering to develop genetically encoded biosensors to enable real-time imaging of neuromodulator dynamics. As part of his postdoctoral pursuits with Dr. Sergiu Pasca at Stanford University, he hopes to combine disciplines between biosensors and modeling human neurological disease using brain region-specific organoids. Despite this shift, his unwavering goal is to deepen the understanding of brain development, disease processes, and translate research to potential treatments for neurological disorders.

INSTITUTE AFFILIATIONS

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

HONORS AND AWARDS

- School of Medicine Dean's Postdoctoral Fellowship, Stanford University (2025)
- Allen G. Marr Dissertation Award, University of California Davis (2023)
- Toni Shippenberg Young Investigator Award, KappaCon (2023)

PROFESSIONAL EDUCATION

- Doctor of Philosophy, University of California Davis (2023)
- Bachelor of Science, University of California Davis (2017)

STANFORD ADVISORS

- Sergiu Pasca, Postdoctoral Faculty Sponsor

PATENTS

- Chunyang Dong, Calvin Ly, David Olson, Lin Tian. "United States Patent US20230384333A1 Gpcr screening method to identify non-hallucinogenic compounds", The Regents of the University of California, Nov 30, 2023

LINKS

- Google Scholar: https://scholar.google.com/citations?user=hA0MsIwAAAAJ&hl=en&oi=ao
- Pasca Lab Website: https://med.stanford.edu/pascalab.html

Publications

PUBLICATIONS

- **Dynorphin modulates reward-seeking actions through a pallido-amygdala cholinergic circuit.** *Neuron*
  Sun, Q., Liu, M., Guan, W., Xiao, X., Dong, C., Bruchas, M. R., Zweifel, L. S., Li, Y., Tian, L., Li, B.
  2025

- **Unlocking opioid neuropeptide dynamics with genetically encoded biosensors.** *Nature neuroscience*
  Dong, C., Gowrishankar, R., Jin, Y., He, X. J., Gupta, A., Wang, H., Sayar-Atasoy, N., Flores, R. J., Mahe, K., Tjahjono, N., Liang, R., Marley, A., Or Mizuno, et al
  2024

- **Prefrontal cortical dynorphin peptidergic transmission constrains threat-driven behavioral and network states.** *Neuron*
  Wang, H., Flores, R. J., Yarur, H. E., Limoges, A., Bravo-Rivera, H., Casello, S. M., Loomba, N., Enriquez-Traba, J., Arenivar, M., Wang, Q., Ganley, R., Ramakrishnan, C., Fenno, et al
  2024

- **Opioidergic signaling contributes to food-mediated suppression of AgRP neurons.** *Cell reports*
  Sayar-Atasoy, N., Yavuz, Y., Laule, C., Dong, C., Kim, H., Rysted, J., Flippo, K., Davis, D., Aklan, I., Yilmaz, B., Tian, L., Atasoy, D.
  2024; 43 (1): 113630

- **Psychedelics promote neuroplasticity through the activation of intracellular 5-HT2A receptors** *SCIENCE*
  Vargas, M. V., Dunlap, L. E., Dong, C., Carter, S. J., Tombari, R. J., Jami, S. A., Cameron, L. P., Patel, S. D., Hennessey, J. J., Saeger, H. N., McCorvy, J. D., Gray, J. A., Tian, et al
  2023; 379 (6633): 700-706

- **Fluorescence Imaging of Neural Activity, Neurochemical Dynamics, and Drug-Specific Receptor Conformation with Genetically Encoded Sensors** *ANNUAL REVIEW OF NEUROSCIENCE*
  Dong, C., Zheng, Y., Long-Iyer, K., Wright, E. C., Li, Y., Tian, L.
  2022; 45: 273-294

- **Psychedelic-inspired drug discovery using an engineered biosensor** *CELL*
  Dong, C., Ly, C., Dunlap, L. E., Vargas, M. V., Sun, J., Hwang, I., Azinfar, A., Oh, W., Wetsel, W. C., Olson, D. E., Tian, L.
  2021; 184 (10): 2779-+

- **Directed Evolution of a Selective and Sensitive Serotonin Sensor via Machine Learning** *CELL*
  Unger, E. K., Keller, J. P., Altermatt, M., Liang, R., Matsui, A., Dong, C., Hon, O. J., Yao, Z., Sun, J., Banala, S., Flanigan, M. E., Jaffe, D. A., Hartanto, et al
  2020; 183 (7): 1986-+

- **An expanded palette of dopamine sensors for multiplex imaging in vivo** *NATURE METHODS*
  Patriarchi, T., Mohebi, A., Sun, J., Marley, A., Liang, R., Dong, C., Puhger, K., Mizuno, G., Davis, C. M., Wiltgen, B., von Zastrow, M., Berke, J. D., Tian, et al
  2020; 17 (11): 1147-+