

## Xue Zhang

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### Publications

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#### PUBLICATIONS

- **Adaptive cognitive control circuit changes associated with problem-solving ability and depression symptom outcomes over 24 months.** *Science translational medicine*  
Zhang, X., Pines, A., Stetz, P., Goldstein-Piekarski, A. N., Xiao, L., Lv, N., Tozzi, L., Lavori, P. W., Snowden, M. B., Venditti, E. M., Smyth, J. M., Suppes, T., Ajilore, et al  
2024; 16 (763): eadh3172
- **Psychiatric Symptoms, Cognition, and Symptom Severity in Children.** *JAMA psychiatry*  
Pines, A., Tozzi, L., Bertrand, C., Keller, A. S., Zhang, X., Whitfield-Gabrieli, S., Hastie, T., Larsen, B., Leikauf, J., Williams, L. M.  
2024
- **Personalized brain circuit scores identify clinically distinct biotypes in depression and anxiety.** *Nature medicine*  
Tozzi, L., Zhang, X., Pines, A., Olmsted, A. M., Zhai, E. S., Anene, E. T., Chesnut, M., Holt-Gosselin, B., Chang, S., Stetz, P. C., Ramirez, C. A., Hack, L. M., Korgaonkar, et al  
2024
- **Ketamine's acute effects on negative brain states are mediated through distinct altered states of consciousness in humans.** *Nature communications*  
Hack, L. M., Zhang, X., Heifets, B. D., Suppes, T., van Roessel, P. J., Yesavage, J. A., Gray, N. J., Hilton, R., Bertrand, C., Rodriguez, C. I., Deisseroth, K., Knutson, B., Williams, et al  
2023; 14 (1): 6631
- **Deconstructing Ketamine-Induced Changes in Cortisol and Dissociative and Affective States in a Controlled Mechanistic Study**  
Hack, L. M., Zhang, X., Brawer, J., Gray, N., Heifets, B., Suppes, T., van Roessel, P., Rodriguez, C., Knutson, B., Williams, L.  
ELSEVIER SCIENCE INC.2022: S178-S179
- **Acute Ketamine Modulates Cognitive Control Network Activity During Cognitive Inhibition: Evidence From a Mechanistic Trial**  
Zhang, X., Hack, L., Brawer, J., Gray, N., Heifets, B., Suppes, T., van Roessel, P., Rodriguez, C., Knutson, B., Williams, L.  
ELSEVIER SCIENCE INC.2022: S225
- **Toward Precision Characterization of Dimensions of Threat Response Pathology in Depression and Anxiety: Testing a Theoretical Model That Integrates Circuits, Symptoms and Quality of Life**  
Hagerty, S., Zhang, X., Tozzi, L., Williams, L.  
SPRINGER NATURE.2021: 516-517
- **Effects of Levodopa Therapy on Cerebral Arteries and Perfusion in Parkinson's Disease Patients.** *Journal of magnetic resonance imaging : JMIR*  
Xiong, Y., Ji, L., He, L., Chen, L., Zhang, X., Chen, Z., Li, X., Zhao, H., Shirakawa, M., Yuan, C., Ma, Y., Guo, H.  
2021
- **Activation of Cognitive Control Network During Inhibition Processing Dynamically Predicts Symptom Outcomes for Depression: A 24-month Longitudinal Study**  
Zhang, X., Stetz, P., Goldstein-Piekarski, A. N., Xiao, L., Lv, N., Rosas, L. G., Lavori, P. W., Snowden, M. B., Venditti, E. M., Simmons, J. M., Smyth, J. M., Suppes, T., Lewis, et al  
ELSEVIER SCIENCE INC.2021: S98

- **Striato-Cortical Neuroimaging Markers in the Reward Network Distinguish Melancholic Depression and Response to Treatment: An iSPOT-D Report**  
Hack, L. M., Zhang, X., Williams, L. M.  
ELSEVIER SCIENCE INC.2021: S270
- **Reduced functional connectivity of default mode network subsystems in depression: Meta-analytic evidence and relationship with trait rumination.** *NeuroImage. Clinical*  
Tozzi, L. n., Zhang, X. n., Chesnut, M. n., Holt-Gosselin, B. n., Ramirez, C. A., Williams, L. M.  
2021; 30: 102570
- **Deep learning-based MR fingerprinting ASL ReconStruction (DeepMARS)** *MAGNETIC RESONANCE IN MEDICINE*  
Zhang, Q., Su, P., Chen, Z., Liao, Y., Chen, S., Guo, R., Qi, H., Li, X., Zhang, X., Hu, Z., Lu, H., Chen, H.  
2020; 84 (2): 1024–34
- **Dynamic changes in thalamic connectivity following stress and its association with future depression severity** *BRAIN AND BEHAVIOR*  
Zhang, X., Li, X., Steffens, D. C., Guo, H., Wang, L.  
2019; 9 (12): e01445
- **Downward cross-modal plasticity in single-sided deafness** *NEUROIMAGE*  
Qiao, Y., Li, X., Shen, H., Zhang, X., Sun, Y., Hao, W., Guo, B., Ni, D., Gao, Z., Guo, H., Shang, Y.  
2019; 197: 608–17
- **Exploring common changes after acute mental stress and acute tryptophan depletion: Resting-state fMRI studies** *JOURNAL OF PSYCHIATRIC RESEARCH*  
Zhang, X., Huettel, S. A., Mullette-Gillman, O. A., Guo, H., Wang, L.  
2019; 113: 172–80
- **Physical exercise increases involvement of motor networks as a compensatory mechanism during a cognitively challenging task** *INTERNATIONAL JOURNAL OF GERIATRIC PSYCHIATRY*  
Ji, L., Pearson, G. D., Zhang, X., Steffens, D. C., Ji, X., Guo, H., Wang, L.  
2018; 33 (8): 1153–59
- **Dual-TRACER: High resolution fMRI with constrained evolution reconstruction** *NEUROIMAGE*  
Li, X., Ma, X., Li, L., Zhang, Z., Zhang, X., Tong, Y., Wang, L., Song, S., Guo, H.  
2018; 164: 172–82