

Shuai Wang

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[Gopal Thinakaran Lab](#)

[Department of Molecular Medicine](#)

University of South Florida, FL

Education and training

- 1/2024 – present **Research Associate**, Mentor: Professor **Gopal Thinakaran**
University of South Florida, FL, United States
- 3/2020 – 12/2023 **Postdoctoral Scholar**, Mentor: Professor **Gopal Thinakaran**
University of South Florida, FL, United States
- 7/2018 – 2/2020 **Postdoctoral Scholar**, Mentor: Professor **Gopal Thinakaran**
University of Chicago, IL, United States
- 9/2010 – 6/2018 **Ph.D.** in Biology, Advisor: Professor **Weidong Li**
Bio-X Institutes, Shanghai Jiao Tong University, China
- 9/2006 – 6/2010 **B.S.** in Biotechnology, Dean of Bio-X Institutes: **Lin He**
Shanghai Jiao Tong University, Shanghai, China

Research Experience

1. University of South Florida **2024-present**
Research Associate
Project 1: Spatial transcriptomic profiling of the Alzheimer's disease-associated GWAS risk factor BIN1 in tau neuropathology model in vivo.
Project 2: The role of m⁶A RNA methylation in tauopathy- and LPS-induced neuroinflammation.
2. University of Chicago and University of South Florida **2018-2023**
Postdoctoral Scholar
Project 1: Alzheimer's disease-associated GWAS risk factor BIN1 influences tau neuropathology in select brain regions in vivo.
Project 2: The role of m⁶A RNA reader YTHDF1 in the progression of tauopathy.
3. Shanghai Jiao Tong University **2010-2018**
Graduate Researcher
Emphasis: Mouse model on psychiatric and cognitive diseases
 - Contributed to the finding that the PHF8 protein functions in cognitive deficits through the mTOR pathway.
 - The methodology for psychiatric and cognitive-related mouse models includes biochemistry, cell biology, neuronal circuits, animal surgery, and behavioral tests.

Citations of my work: [Google Scholar](#) and [Web of Science](#)

Publications: * First author, # Co-first author.

1. Govindarajan Karthivashan, **Shuai Wang**#, Qi Wu, Abhishek Dahal, Xiuju Li, Danny Galleguillos, Simonetta Sipione, Gopal Thinakaran, Satyabrata Kar. *Native PLGA nanoparticles attenuate disease pathology via multiple pathways in 5XFAD Alzheimer's model*. Alzheimer's & Dementia Journal, [Accepted, Jan 2026](#).
2. **Shuai Wang***, Moorthi Ponnusamy, Om Patel, Mitchell Hansen, Lisa Collier, Shane Collier, Gopal Thinakaran. *Spatiotemporal transcriptomic profiling reveals metabolic dysfunction prior to overt tauopathy in the PS19 mouse model*. Experimental & Molecular Medicine, [Accepted, Nov 2025](#).
3. Abdul Aziz Khan, **Shuai Wang**#, Ziyang Wang, Zainab Rehman, Lei Chen, Yifang Kuang, Xu Zhang, Yuting Li, Jiarun Yang, Jun Ye, Xianda Ma, Qian Zhao, Ying Ding, Tatsuo Suzuki, Zhaohui Lan & Weidong Li. *Exploration of schizophrenia-related behavioral and molecular abnormalities in a mutant mouse model with a mutation in the TVV motif of the ErbB4 gene*. Molecular Brain, 2025.
4. Danielle M Blazier, Eric M Lewandowski, Natasha Ram, Xiujun Zhang, **Shuai Wang**, Om Patel, Lisa Collier, Paola Defilippi, Yu Chen, Gopal Thinakaran. *A biophysical and molecular characterization of the interaction between the Alzheimer risk factor BIN1 and the neuronal scaffold protein p140Cap*. Journal of Biological Chemistry, 2025.
5. Joseph D McMillan, **Shuai Wang**, Jessica Wohlfahrt, Jennifer Guergues, Stanley M Stevens, Gopal Thinakaran. *Proteomic characterization of the Alzheimer's disease risk factor BIN1 interactome*. Molecular & Cellular Proteomics, 2025.
6. Daniel Moreira-Silva, Melike Yuksel, Moorthi Ponnusamy, Mitchell T Hansen, Joseph D McMillan, Sneha Geethakrishnan, **Shuai Wang**, Lisa A Collier, Gopal Thinakaran. *Amylin exacerbates tau pathology in the visual cortex of diabetic mice by impairing lysosomal activity*. Genes & Diseases, 2025.
7. Lei Chen, Yuting Li, Miànggang Liu, Zhaohui Lan, Xu Zhang, Xiujuan Yang, Qian Zhao, **Shuai Wang**, Longyong Xu, Ying Zhou, Yifang Kuang, Tatsuo Suzuki, Katsuhiko Tabuchi, Eiki Takahashi, Miou Zhou, Charlie Degui Chen, Tianle Xu, Weidong Li. *Desipramine reverses remote memory deficits by activating calmodulin-CaMKII pathway in a UTX knockout mouse model of Kabuki syndrome*. General Psychiatry, 2024.
8. Niat T Gebru, Jennifer Guergues, Laura A Verdina, Jessica Wohlfahrt, **Shuai Wang**, Debra S Armendariz, Marsilla Gray, David Beaulieu-Abdelahad, Stanley M Stevens Jr, Danielle Gulick, Laura J Blair. *Fkbp5 gene deletion: Circadian rhythm profile and brain proteomics in aged mice*. Aging Cell, 2024.
9. P Cody He, Jiangbo Wei, Xiaoyang Dou, Bryan T Harada, Zijie Zhang, Ruiqi Ge, Chang Liu, Li-Sheng Zhang, Xianbin Yu, **Shuai Wang**, Ruitu Lyu, Zhongyu Zou, Mengjie Chen, Chuan He. *Exon architecture controls mRNA m6A suppression and gene expression*. Science, 2023.
10. Moorthi Ponnusamy, **Shuai Wang**, Melike Yuksel, Mitchell T. Hansen, Danielle M., Blazier, Joseph D., McMillan, Xiaolin, Zhang, Eric B., Dammer, Lisa, Collier, Gopal Thinakaran. *Loss of forebrain BIN1 attenuates hippocampal pathology and neuroinflammation in tauopathy mice*. Brain, 2022.
11. Ari Sudwants, Supriya Ramesha, Tianwen Gao, Moorthi Ponnusamy, **Shuai Wang**, Mitchell Hansen, Alena Kozlova, Sara Bitarafan, Prateek Kumar, David Beaulieu-Abdelahad, Xiaolin

- Zhang, Lisa Collier, Charles Szekeres, Levi B Wood, Jubao Duan, Gopal Thinakaran, Srikant Rangaraju. *BIN1 is a key regulator of proinflammatory and neurodegeneration-related activation in microglia*, Molecular neurodegeneration, 2022.
12. Xu Zhang, Xixia Chu, Lei Chen, Juan Fu, **Shuai Wang**, Jinjing Song, Guanghan Kan, Weizhong Jiang, Guang He, Xiaoping Chen, Weidong Li. *Simulated weightlessness procedure, head-down bed rest impairs adult neurogenesis in the hippocampus of rhesus macaque*. Mol Brain, 2019.
 13. Xuemei Chen, **Shuai Wang**#, Ying Zhou, Yanfei Han, Shengtian Li, Qing Xu, Longyong Xu, Ziqi Zhu, Youming Deng, Lu Yu, Lulu Song, Adele Pin Chen, Juan Song, Eiki Takahashi, Guang He, Lin He, Weidong Li, Charlie Degui Chen. *Phf8 histone demethylase deficiency causes cognitive impairments through the mTOR pathway*. Nat Commun, 2018.
 14. Xu Zhang, Xixia Chu, Lei Chen, Juan Fu, **Shuai Wang**, Jinjing Song, Guanghan Kan, Weizhong Jiang, Guang He, Xiaoping Chen, Weidong Li. *Abnormal circadian oscillation of hippocampal MAPK activity and power spectrums in NF1 mutant mice*. Mol Brain, 2017.
 15. Xixia Chu, Ying Zhou, Zhiqiang Hu, Jingyu Lou, Wei Song, Jing Li, Xiao Liang, Chen Chen, **Shuai Wang**, Beimeng Yang, Lei Chen, Xu Zhang, Jinjing Song, Yujie Dong, Shiqing Chen, Lin He, Qingguo Xie, Xiaoping Chen, Weidong Li. *24-hour-restraint stress induces long-term depressive-like phenotypes in mice*. Sci Rep, 2016.
 16. Yujie Dong, Ying Zhou, Xixia Chu, Shiqing Chen, Lei Chen, Beimeng Yang, Xu Zhang, Lin Wang, **Shuai Wang**, Jingyu Lou, Qing Deng, Li Wang, Zheyi Cao, Jianan Wang, Jiabin Xie, Tatiana Serdyuk, Shengtian Li, Lin He, Xiaoping Chen, Weidong Li. *Dental noise exposed mice display depressive-like phenotypes*. Mol Brain, 2016.
 17. Wei Song, Kai Zhang, Jinhua Sun, Lina Ma, Forrest Fabian Jesse, Xiaochun Teng, Ying Zhou, Hechen Bao, Shiqing Chen, **Shuai Wang**, Beimeng Yang, Xixia Chu, Wenhua Ding, Yasong Du, Zaohuo Cheng, Bin Wu, Shanguang Chen, Guang He, Lin He, Xiaoping Chen, Weidong Li. *A simple spatial working memory and attention test on paired symbols shows developmental deficits in schizophrenia patients*. Neural Plasticity, 2013.