Curriculum Vitae

Xuewei Wang, Ph.D.

Assistant Professor
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EDUCATION AND TRAINING

01/2016-05/2020	**Postdoctoral Scholar** (Mentor: Dr. Fengquan Zhou) Johns Hopkins University School of Medicine, Baltimore, MD
09/2009-01/2016	**Ph.D., Neurobiology** (Mentor: Dr. Cailian Cui) Peking University, Beijing, China
09/2004-07/2009	**Bachelor of Medicine (BMed), Basic Medical Sciences** Peking University, Beijing, China

ACADEMIC APPOINTMENTS

09/2023-present	**Assistant Professor** University of South Florida Morsani College of Medicine, Tampa, FL
06/2020-09/2023	**Research Associate** Johns Hopkins University School of Medicine, Baltimore, MD

GRANT SUPPORT

03/2024-02/2027	**R00EY031742** NIH Pathway to Independence Award (K99/R00) from the National Eye Institute Title: Deciphering the transcriptional regulatory network controlling RGC axon growth to promote RGC axon regeneration and cell survival after axonal injury
03/2024-02/2026	Merkin Peripheral Neuropathy and Nerve Regeneration Center Title: Elucidating the mechanisms by which H3K27me3 maintains normal axon regeneration

HONORS AND AWARDS

2024	**Travel Grant**, RReSTORe Conference, Seattle, WA
2022	**Travel Grant**, RReSTORe Conference, Denver, CO
2010-2011	**Tri-merit Outstanding Student**, Peking University, Beijing, China
2009-2012	**Graduate Student Scholarship**, Peking University, Beijing, China

TEACHING AND MENTORING

Teaching

2025-present	**Lecturer**, BCH6627: Molecular Basis of Disease University of South Florida, Tampa, FL
2010-2011	**Lecturer**, Neurobiological Experiments Peking University, Beijing, China

Mentoring

2025-	**Abigahill Simon**, PhD Student at University of South Florida
2024-	**Carla Andreia Abreu de Santana**, Postdoctoral Fellow at University of South Florida
2018-2020	**Anish Kosanam**, Undergraduate Research Assistant at Johns Hopkins University Current position: Medical Student at Case Western Reserve University

2018-2019	**Arinze Ochuba**, Undergraduate Research Assistant at Johns Hopkins University Current position: Medical Student at Johns Hopkins University School of Medicine
2018-2019	**Yingchi Zhang**, Visiting Student at Johns Hopkins University Current position: Surgeon at Tongji Hospital, Wuhan, China
2017 summer	**John Lee Soto-Vargas**, NIDDK STEP-UP Summer Student at Johns Hopkins University Current position: Graduate Student at Yale School of Medicine
2017-2018	**Bryan Dong**, High School Research Assistant at Johns Hopkins University Current position: MD/PhD Student at Johns Hopkins University School of Medicine
2016-2018 summer	**Joe Xie**, Undergraduate Research Assistant at Johns Hopkins University Current position: Dental Student at UTHSC, College of Dentistry
2016-2018	**Binbin Yang**, Visiting Scholar at Johns Hopkins University Current position: Physician at the 2nd Xiangya Hospital, Changsha, China
2016-2018	**Qiao Li**, Visiting Scholar at Johns Hopkins University Current position: Surgeon at the First Hospital of Jilin University, Changchun, China
2016-2017	**Sehwa Kang**, Undergraduate Research Assistant at Johns Hopkins University Current position: Medical student at UT Health San Antonio, Long School of Medicine
2015-2016	**Christopher Katchis**, Undergraduate Research Assistant at Johns Hopkins University Current position: Medical Student at New York Medical College

SERVICES

Committee

07/2025-present	Member, USF Health Morsani College of Medicine Committee on Research
12/2025	Member, CQE committee for Dhanashri Satav

Community

03/2025-present	Director, Byrd Institute Microscopy Core

Peer review

Community reviewer	Frontiers in Cellular Neuroscience
Ad hoc reviewer	EMBO Reports, Genes & Diseases, Neural Regeneration Research, Regional Anesthesia & Pain Medicine, Journal of Neurological Sciences, Frontiers in Pharmacology

PRESENTATIONS

2025	**Epigenetic regulation of axon regeneration by H3K27me3** (oral) American Society for Neural Therapy and Repair Annual Conference, Clearwater Beach, FL
2025	**Elucidating the mechanisms by which a repressive histone mark favors axon regeneration** (oral) Merkin Peripheral Neuropathy and Nerve Regeneration Center Symposium, Baltimore, MD
2024	**A repressive histone mark that favors axon regeneration** (oral) Neuroscience Institute Seminar Series, University of South Florida Morsani College of Medicine, Tampa, FL
2024	**Boosting the intrinsic axon regeneration ability of retinal ganglion cells: from epigenetic regulation to cytoskeletal modification** (oral) Department of Ophthalmology, University of South Florida Morsani College of Medicine, Tampa, FL
2024	**Epigenetic silencing of axon regeneration inhibitors by H3K27me3 in dorsal root ganglion neurons** (oral) Merkin Peripheral Neuropathy and Nerve Regeneration Center, Johns Hopkins University, Baltimore, MD

2022 **Targeting chromatin accessibility to promote axon regeneration in the CNS** (oral)
Central Nervous System Injury and Repair, Gordon Research Seminar, Oxnard, CA

2022 **Epigenetic rejuvenation to enhance CNS axon regeneration** (oral)
Optic Nerve Regenerative Initiative Meeting

2021 **Epigenetic rejuvenation to enhance CNS axon regeneration** (oral)
SCBA DC-Baltimore Chapter 2021 Annual Symposium

2021 **The polycomb group protein Ezh2 promotes optic nerve regeneration** (oral)
ARVO Annual Meeting

2021 **Polycomb group protein Ezh2 supports mammalian axon regeneration in peripheral and central nervous systems** (poster, Neurobiology and Neuronal Signaling discussion group chair)
Experimental Biology Annual Meeting

2021 **Polycomb group protein Ezh2 promotes mammalian axon regeneration in the central nervous system** (poster)
SfN Global Connectome

2017 **Regulation of mammalian axon regeneration by Lin28/let-7 pathway** (poster)
Neuroscience program students recruiting, Johns Hopkins University, Baltimore, MD

2016 **Regulation of mammalian axon regeneration by Lin28/let-7 pathway** (poster)
SfN Annual Meeting, San Diego, CA

BIBLIOGRAPHY

Select publications

1. Yang, S. G.*, Li, C. P.*, **Wang, X. W.***, Huang, T.*, Qian, C., Li, Q., Zhao, L. R., Zhou, S. Y., Ding, C. Y., Nie, R., Saijilafu, Hong, Y. C., Liu, C. M., & Zhou, F. Q. (2025). Roles of Kdm6a and Kdm6b in Regulation of Mammalian Neural Regeneration. *Advanced science (Weinheim, Baden-Wurttemberg, Germany)*, *12*(16), e2405537. Advance online publication. (*co-first authors) https://doi.org/10.1002/advs.202405537
2. **Wang, X. W.*,#**, Yang, S. G.*, Hu, M. W.*, Wang, R. Y.*, Zhang, C., Kosanam, A. R., Ochuba, A. J., Jiang, J. J., Luo, X., Guan, Y., Qian, J., Liu, C. M.#, & Zhou, F. Q.# (2023). Histone methyltransferase Ezh2 coordinates mammalian axon regeneration via regulation of key regenerative pathways. *The Journal of clinical investigation*, *134*(3), e163145. (*co-first authors, #co-corresponding authors) https://doi.org/10.1172/JCI163145
3. Yang, S. G.*, **Wang, X. W.***, Qian, C., & Zhou, F. Q. (2022). Reprogramming neurons for regeneration: The fountain of youth. *Progress in neurobiology*, *214*, 102284. (*co-first authors) https://doi.org/10.1016/j.pneurobio.2022.102284
4. **Wang, X. W.***, Yang, S. G.*, Zhang, C.*, Hu, M. W., Qian, J., Ma, J. J., Zhang, Y., Yang, B. B., Weng, Y. L., Ming, G. L., Kosanam, A. R., Saijilafu, & Zhou, F. Q. (2020). Knocking out non-muscle myosin II in retinal ganglion cells promotes long-distance optic nerve regeneration. *Cell reports*, *31*(3), 107537. (*co-first authors) https://doi.org/10.1016/j.celrep.2020.107537
5. **Wang, X. W.**, Li, Q., Liu, C. M., Hall, P. A., Jiang, J. J., Katchis, C. D., Kang, S., Dong, B. C., Li, S., & Zhou, F. Q. (2018). Lin28 signaling supports mammalian PNS and CNS axon regeneration. *Cell reports*, *24*(10), 2540–2552.e6. https://doi.org/10.1016/j.celrep.2018.07.105
6. Jia, M.*, **Wang, X.***, Zhang, H., Wang, X., Ma, H., Yang, M., Li, Y., & Cui, C. (2021). MicroRNA-132 is involved in morphine dependence via modifying the structural plasticity of the dentate gyrus neurons in rats. *Addiction biology*, e13086. Advance online publication. (*co-first authors) https://doi.org/10.1111/adb.13086
7. Shen, F.*, **Wang, X. W.***, Ge, F. F., Li, Y. J., & Cui, C. L. (2016). Essential role of the NO signaling pathway in the hippocampal CA1 in morphine-associated memory depends on glutaminergic receptors. *Neuropharmacology*, *102*, 216–228. (*co-first authors) https://doi.org/10.1016/j.neuropharm.2015.11.008

Other publications

8. Xu, M., Li, Z., Thottappillil, N., Cherief, M., Zhu, M., Xing, X., Gomez-Salazar, M., Rao, C., Ramesh, S., Mwirigi, J. M., Sankaranarayanan, I., Tavares-Ferreira, D., Zhang, C., **Wang, X. W.**, Archer, M., Guan, Y., Tower, R. J., Cahan, P., Price, T. J., Clemens, T. L., … James, A. W. (2026). Mapping somatosensory afferent circuitry to bone identifies neurotrophic signals required for fracture healing. *Science (New York, N.Y.)*, *391*(6781), eadr9608. https://doi.org/10.1126/science.adr9608

9. Zhang, C., Huang, Q., Ford, N. C., Limjunyawong, N., Lin, Q., Yang, F., Cui, X., Uniyal, A., Liu, J., Mahabole, M., He, H., **Wang, X. W.**, Duff, I., Wang, Y., Wan, J., Zhu, G., Raja, S. N., Jia, H., Yang, D., Dong, X., … Guan, Y. (2024). Human birth tissue products as a non-opioid medicine to inhibit post-surgical pain. *eLife13:RP101269*. https://doi.org/10.7554/eLife.101269.1
10. He, S. Q., Zhang, C., **Wang, X. W.**, Huang, Q., Liu, J., Lin, Q., He, H., Yang, D. Z., Tseng, S. C., & Guan, Y. (2024). HC-HA/PTX3 from Human Amniotic Membrane Induced Differential Gene Expressions in DRG Neurons: Insights into the Modulation of Pain. *Cells*, *13*(22), 1887. https://doi.org/10.3390/cells13221887
11. Soucy, J. R., Aguzzi, E. A.*, Cho, J.*, Gilhooley, M. J.*, Keuthan, C.*, Luo, Z.*, Monavarfeshani, A.*, Saleem, M. A.*, **Wang, X. W.***, Wohlschlegel, J.*, RReSTORe Consortium, Baranov, P., Di Polo, A., Fortune, B., Gokoffski, K. K., Goldberg, J. L., Guido, W., Kolodkin, A. L., Mason, C. A., Ou, Y., … Johnson, T. V. (2023). Retinal ganglion cell repopulation for vision restoration in optic neuropathy: a roadmap from the RReSTORe Consortium. *Molecular neurodegeneration*, *18*(1), 64. (*co-second authors listed by alphabetical order of last name initials) https://doi.org/10.1186/s13024-023-00655-y
12. Zhang, C., Hu, M. W., **Wang, X. W.**, Cui, X., Liu, J., Huang, Q., Cao, X., Zhou, F. Q., Qian, J., He, S. Q., & Guan, Y. (2022). scRNA-sequencing reveals subtype-specific transcriptomic perturbations in DRG neurons of *Pirt*^{EGFPf} mice in neuropathic pain condition. *eLife*, *11*, e76063. https://doi.org/10.7554/eLife.76063
13. Zheng, Q., Xie, W., Lückemeyer, D. D., Lay, M., **Wang, X. W.**, Dong, X., Limjunyawong, N., Ye, Y., Zhou, F. Q., Strong, J. A., Zhang, J. M., & Dong, X. (2022). Synchronized cluster firing, a distinct form of sensory neuron activation, drives spontaneous pain. *Neuron*, *110*(2), 209–220.e6. https://doi.org/10.1016/j.neuron.2021.10.019
14. Tower, R. J., Li, Z., Cheng, Y. H., **Wang, X. W.**, Rajbhandari, L., Zhang, Q., Negri, S., Uytingco, C. R., Venkatesan, A., Zhou, F. Q., Cahan, P., James, A. W., & Clemens, T. L. (2021). Spatial transcriptomics reveals a role for sensory nerves in preserving cranial suture patency through modulation of BMP/TGF-β signaling. *Proceedings of the National Academy of Sciences of the United States of America*, *118*(42), e2103087118. https://doi.org/10.1073/pnas.2103087118
15. Costa, A. R., Sousa, S. C., Pinto-Costa, R., Mateus, J. C., Lopes, C. D., Costa, A. C., Rosa, D., Machado, D., Pajuelo, L., **Wang, X.**, Zhou, F. Q., Pereira, A. J., Sampaio, P., Rubinstein, B. Y., Mendes Pinto, I., Lampe, M., Aguiar, P., & Sousa, M. M. (2020). The membrane periodic skeleton is an actomyosin network that regulates axonal diameter and conduction. *eLife*, *9*, e55471. https://doi.org/10.7554/eLife.55471
16. Wang, Z., Yue, L., Cui, C., Liu, S., **Wang, X.**, Li, Y., & Ma, L. (2019). Top-down control of the medial orbitofrontal cortex to nucleus accumbens core pathway in decisional impulsivity. *Brain structure & function*, *224*(7), 2437–2452. https://doi.org/10.1007/s00429-019-01913-w
17. Jia, M., **Wang, X.**, Zhang, H., Ye, C., Ma, H., Yang, M., Li, Y., & Cui, C. (2019). MicroRNA-132 in the Adult Dentate Gyrus is Involved in Opioid Addiction Via Modifying the Differentiation of Neural Stem Cells. *Neuroscience bulletin*, *35*(3), 486–496. https://doi.org/10.1007/s12264-019-00338-z
18. Zhang, H., Jia, M., **Wang, X. W.**, Ye, C., Li, Y., Wang, N., Elefant, F., Ma, H., & Cui, C. (2019). Dentate gyrus μ-opioid receptor-mediated neurogenic processes are associated with alterations in morphine self-administration. *Scientific reports*, *9*(1), 1471. https://doi.org/10.1038/s41598-018-37083-8
19. Meng, X., Shen, F., Li, C., Li, Y., & **Wang, X.** (2016). Depression-like behaviors in tree shrews and comparison of the effects of treatment with fluoxetine and carbetocin. *Pharmacology, biochemistry, and behavior*, *145*, 1–8. https://doi.org/10.1016/j.pbb.2016.03.006
20. Jiang, J. J., Liu, C. M., Zhang, B. Y., **Wang, X. W.**, Zhang, M., Saijilafu, Zhang, S. R., Hall, P., Hu, Y. W., & Zhou, F. Q. (2015). MicroRNA-26a supports mammalian axon regeneration in vivo by suppressing GSK3β expression. *Cell death & disease*, *6*(8), e1865. https://doi.org/10.1038/cddis.2015.239
21. Xiang, X., Jiang, Y., Ni, Y., Fan, M., Shen, F., **Wang, X.**, Han, J., & Cui, C. (2012). Catechol-O-methyltransferase polymorphisms do not play a significant role in pain perception in male Chinese Han population. *Physiological genomics*, *44*(5), 318–328. https://doi.org/10.1152/physiolgenomics.00162.2011
22. Zuo, Y., Wang, X., Cui, C., Luo, F., Yu, P., & **Wang, X.** (2012). Cocaine-induced impulsive choices are accompanied by impaired delay-dependent anticipatory activity in basolateral amygdala. *Journal of cognitive neuroscience*, *24*(1), 196–211. https://doi.org/10.1162/jocn_a_00131

OTHER ACTIVITIES

2005-2011 **Volunteer**
New Day Foster Home (an orphanage for abandoned children with birth defects), Beijing, China