

## 救死扶伤，不辞艰辛，恪守医德，维护医术的圣洁和荣誉。

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#### 学习经历

1999-2004年，第三军医大学，获临床医学学士学位

2004-2007年，第三军医大学，获医学硕士学位

2007-2011年，德国慕尼黑工业大学医学院，博士（PhD）

#### 工作经历

2011-2013年，德国慕尼黑工业大学神经科学研究所，博士后

2014-2019年，中国科学院脑科学与智能技术卓越创新中心，年轻骨干

2013年至今，第三军医大学基础医学院，教授/研究员/博士生导师

2019年至今，重庆大学医学院兼聘研究生导师

2020年至今，中国科学院脑科学与智能技术卓越创新中心，骨干

#### 研究方向、教学课程

大脑皮层功能及记忆机制，光学成像技术

生理学、神经生物学等课程教学

#### 代表性论文

##### Book chapters

1. Jin W, Qin H, Zhang K, Chen X. (2020) Spatial Navigation. *Adv Exp Med Biol* 1284:63-90.

##### Articles and reviews

1. Qin H\*, Fu L, Jian T, Jin W, Liang M, Li J, Chen Q, Yang X, Du H, Liao X, Zhang K, Wang R, Liang S, Yao J, Hu B, Ren S, Zhang C, Wang Y, Hu Z, Jia H, Konnerth A, Chen X\*. (2022) REM sleep-active hypothalamic neurons may contribute to hippocampal social memory consolidation. *Neuron*. Accepted.
2. Hu J, Shi Y, Zhang J, Huang X, Wang Q, Zhao H, Shen J, Chen Z, Song W, Zheng P, Zhan S, Sun Y, Cai P, An K, Ouyang C, Zhao B, Zhou Q, Xu L, Xiong W, Zhang Z, Meng J, Chen J, Ma Y, Zhao H, Zhang M, Qu K, Hu J, Luo M, Xu F, Chen X, Xiong Y, Bao J\*, Xue T\*. (2022) Melanopsin retinal ganglion cells mediate light-promoted brain development. *Cell* 50092-8674(22)00912-6.
3. Wang M, Liu K, Pan J, Li J, Sun P, Zhang Y, Li L, Guo W, Xin Q, Zhao Z, Liu Y, Zhou Z, Lyu J, Zheng T, Han Y, Zhang C, Liao X\*, Zeng S\*, Jia H\*, Chen X\*. (2022) Brain-wide projection reconstruction of single functionally defined neurons. *Nature Communications* 3:1531.
4. Tang J, Xue R, Wang Y, Li M, Jia H, Pakan J, Li L\*, Chen X\*, Li X\*. (2022) Optical Fiber-Based Recording of Climbing Fiber Ca<sup>2+</sup> Signals in Freely Behaving Mice. *Biology* 11, 907.
5. Liu W, Pan J, Xu Y, Wang M, Jia H, Zhang K, Chen X\*, Li X\*, Liao X\*. (2022) Fast and Accurate Motion Correction for Two-Photon Ca<sup>2+</sup> Imaging in Behaving Mice. *Front Neuroinform* Apr 26.
6. Rao Y, Gao Z, Li X, Li X, Li J, Liang S, Li D, Zhai J, Yan J\*, Yao J\*, Chen X\*. (2022) Ventrolateral Periaqueductal Gray Neurons Are Active During Urination. *Front Cell Neurosci* 16:865186.
7. Yang Z, Gong M, Jian T, Li J, Yang C, Ma Q, Deng P, Wang Y, Huang M, Wang H, Yang S, Chen X, Yu Z, Wang M, Chen C, Zhang K. (2022) Engrafted glial progenitor cells yield long-term integration and sensory improvement in aged mice. *Stem Cell Res Ther* 13:285.
8. Lu J, Zhang Z, Yin X, Tang Y, Ji R, Chen H, Guang Y, Gong X, He Y, Zhou W, Wang H, Cheng K, Wang Y, Chen X, Xie P, Guo ZV. (2022) An entorhinal-visual cortical circuit regulates depression-like behaviors. *Mol Psychiatry* doi: 10.1038/s41380-022-01540-8.
9. Xiao W, Jiao ZL, Senol E, Yao J, Zhao M, Zhao ZD, Chen X\*, Cao P\*, Fu Y\*, Gao Z\*, Shen WL\*, Xu XH\*. (2022) Neural circuit control of innate behaviors. *Sci China Life Sci* 65:466-499. (Review)
10. Zhang K, Forster R, He W, Liao X, Li J, Yang C, Qin H, Wang M, Ding R, Li R, Jian T, Wang Y, Zhang J, Yang Z, Zhang Y, Qin S, Lu Y, Chen T, Stobart J, Weber B, Adelsberger H, Konnerth A\*, Chen X\*. (2021) Fear learning induces  $\alpha 7$ -nicotinic acetylcholine receptor-mediated astrocytic responsiveness that is required for memory persistence. *Nature Neuroscience* 24:1686-1698.
11. Li J, Liu S, Song C, Hu Q, Zhao Z, Deng T, Wang Y, Zhu T, Zou L, Wang S, Chen J, Liu L, Hou H, Yuan K, Zheng H, Liu Z, Chen X, Sun W, Xiao B, Xiong W. (2021) PIEZO2 mediates ultrasonic hearing via cochlear outer hair cells in mice. *Proc Natl Acad Sci U S A* 118:e2101207118.
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13. Qin H, He W, Yang C, Li J, Jian T, Liang S, Chen T, Feng H, Chen X, Liao X\*, Zhang K\*. (2020) Monitoring Astrocytic Ca<sup>2+</sup> Activity in Freely Behaving Mice. *Front Cell Neurosci*. Dec 03
14. Wang M, Liao X\*, Li R, Liang S, Ding R, Li J, Zhang JX, He W, Liu K, Pan J, Zhao Z, Li T, Zhang K, Li X, Lyu J, Zhou Z, Varga Z, Mi Y, Zhou Y, Yan J, Zeng S, Liu J, Konnerth A, Nelken I, Jia H\*, Chen X\*. (2020) Single-neuron representation of learned complex sounds in the auditory cortex. *Nature Communications* 11:4361.
15. Yang M, Zhou Z, Zhang J, Jia S, Li T, Guan J, Liao X, Leng B, Lyu J, Zhang K, Li Min, Gong Y, Zhu Z, Yan J, Zhou Y, Liu J, Varga Z, Konnerth A, Tang Y, Gao J, Chen X, Jia H. (2019) MATRIEX Imaging: Multitarea Two-photon Real-time In-vivo Explorer. *Light Sci Appl* 8:109.
16. Qin H, Lu J, Jin W, Chen X, Fu L. (2019) Multichannel fiber photometry for mapping axonal terminal activity in a restricted brain region in freely moving mice. *Neurophotonics* 6:035011.
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18. Yao J, Li Q, Li X, Qin H, Liang S, Liao X, Chen X\*, Li W\*, Yan J\*. (2019) Simultaneous Measurement of Neuronal Activity in the Pontine Micturition Center and Cystometry in Freely Moving Mice. *Front Neurosci* 13:563.
19. Wu W, Yang Y, Yang Y, Zhang K, Guo L, Ge H, Chen X\*, Liu J\*, Feng H\*. (2019) Molecular Engineering of an Organic NIR-II Fluorophore with Aggregation-Induced Emission Characteristics for In Vivo Imaging. *Small* 15:e1805549.
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23. Li R, Wang M, Yao J, Liang SS, Liao X, Yang M, Zhang J, Yan Jia, Jia H, Chen X\*, Li X\*. (2018) Two-Photon Functional Imaging of the Auditory Cortex in Behaving Mice: From Neural Networks to Single Spines. *Front Neural Circuits* 12:33.
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27. Li J, Zhang J, Wang M, Pan J, Chen X\*, Liao X\*. Functional imaging of neuronal activity of auditory cortex by using Cal-520 in anesthetized and awake mice. (2017) *Biomed Opt Express* 8:2599-2610.
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38. Chen X, Leischner U, Rocheffort NL, Nelken I, Konnerth A\*. (2011) Functional mapping of single spines in cortical neurons in vivo. *Nature* 475:501-5.
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45. Huang HP, Wang SR, Yao W, Zhang C, Zhou Y, Chen X, Zhang B, Xiong W, Wang LY, Zheng LH, Landry M, Hokfelt T, Xu ZQ & Zhou Z\*. (2007) Long latency of evoked quantal transmitter release from somata of locus coeruleus neurons in rat pontine slices. *Proc Natl Acad Sci USA* 104:1401-1406.

#### 代表性项目及奖励

1. 2012年入选国家高层次人才青年项目
2. 2015年获得国家科技部青年973项目
3. 2018年国家自然科学基金中国-以色列科学基金合作项目
4. 2019年获得国家杰出青年科学基金
5. 2021年国家重大科研仪器研制项目
6. 成果入选2021中国神经科学十大进展

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