

ION Publication List

(2017.01-2017.12)

1. Li, K., Jiang, Q., Bai, X., Yang, Y., Ruan, M., and **Cai, S.*** (2017) Tetrameric assembly of K⁺ channels requires ER-located chaperone proteins. *Mol. Cell* 65: 52-65.
2. Zhang S., Duan L., He S., Zhuang G., and **Yu X.*** (2017) Phosphatidylinositol 3,4-bisphosphate regulates neurite initiation and dendrite morphogenesis via actin aggregation. *Cell Res.* 27: 253-273.
3. Chen, Z., Li, X., Zhou, J., Yuan, B., Yu, B., Tong, D., Cheng, C., Shao, Y., Xia, S., Zhang, R., Lyu, J., Yu, X., Dong, C., Zhou, W., and **Qiu, Z.*** (2017) Accumulated quiescent neural stem cells in adult hippocampus of the mouse model for the MECP2 duplication syndrome. *Sci. Rep.* 7: 41701.
4. Yuan, B., Cheng, T., Yang, K., Zhang, X., and **Qiu, Z.*** (2017) Autism-related protein MeCP2 regulates FGF13 expression and emotional behaviors. *J. Genet. Genomics* 44: 63-66.
5. Yang, L., Dong, F., Yang, Q., Yang, P., Wu, R., Wu, Q., Wu, D., Li, C., Zhong, Y., Lu, Y., Cheng, X., Xu, F., Chen, L., Bao, L., and **Zhang, X.*** (2017) FGF13 selectively regulates heat nociception by interacting with Nav1.7. *Neuron* 93: 806-821.
6. Zhang, B., Yao, Y., Zhang, H., Kawakami, K. and **Du, J.*** (2017) Left habenula mediates light-preference behavior in zebrafish via an asymmetrical visual pathway. *Neuron* 93: 914-928.
7. Li, H., Liu, X., **Andolina, I.***, Li, X., Lu, Y., Spillmann, L., and **Wang, W.*** (2017) Asymmetries of dark and bright negative afterimages are paralleled by subcortical ON and OFF poststimulus responses. *J. Neurosci.* 37: 1984-1996.
8. Cheng, T.*, Chen, J., Wan, H., Tang, B., Tian, W., Liao, L.*, and **Qiu, Z.*** (2017) Regulation of mRNA splicing by MeCP2 via epigenetic modifications in the brain. *Sci. Rep.* 7: 42790.
9. Chang, L., Zhang, S., **Poo, M.***, and **Gong, N.*** (2017) Spontaneous expression of mirror self-recognition in monkeys after learning precise visual-proprioceptive association for mirror images. *Proc. Natl. Acad. Sci. USA.* 144: 3258-3263.
10. Zhou, L., Liu, M., Li, Q., Deng, J., Mu, D., and **Sun, Y.*** (2017) Organization of functional long-range circuits controlling the activity of serotonergic neurons in the dorsal raphe nucleus. *Cell Rep.* 18: 3018-3032.
11. Li, Y., Xu, J., Liu, Y., Zhu, J., Liu, N., Zeng, W., Huang, N., Rasch, M., Jiang, H., Gu, X., Li, X., Luo, M., Li, C., Teng, J., Chen, J., Zeng, S., Lin, L., and Zhang, X.* (2017) A distinct entorhinal cortex to hippocampal CA1 direct circuit for olfactory

- associative learning. *Nat. Neurosci.* 20: 559-570.
12. Yang, Z., Li, P., Chen, R., Wang, J., Wang, S., Shen, Y., Wu, X., Fang, B., **Cheng, X.***, and **Xiong, Z.*** (2017) ADAM10-Initiated release of notch intracellular domain regulates microtubule stability and radial migration of cortical neurons. *Cereb. Cortex* 27: 919-932.
 13. Wang, M., Li, H., Takumi, T., Qiu, Z., Xu, X.*, **Yu, X.***, and **Bian, W.*** (2017) Distinct defects in spine formation or pruning in two gene duplication mouse models of autism. *Neurosci. Bull.* 33: 143-152.
 14. Wen, Z., Cheng, T., Yin, Z., Sun, S., Wang, Z., Yu, S., Zhang, Y.*, **Qiu, Z.***, and Du, Y.* (2017) Identification of the genetic cause for childhood disintegrative disorder by whole-exome sequencing. *Neurosci. Bull.* 33: 251-254.
 15. Ma, S., Sun, R., Jiang, B., Gao, J., Deng, W., Liu, P., He, R., Cui, J., Ji, M., Yi, W., Yang, P., Wu, X., Xiong, Y., **Qiu, Z.***, Ye, D.*, and Guan, K.* (2017) L2hgdh deficiency accumulates L-2-hydroxyglutarate with progressive leukoencephalopathy and neurodegeneration. *Mol. Cell. Biol.* 37: e00492-16.
 16. Fan, Z., Zhao, M., Joshi, P., Li, P., Zhang, Y., Guo, W., Xu, Y., Wang, H., Zhao, Z., and **Yan, J.*** (2017) A class of circadian long non-coding RNAs mark enhancers modulating long-range circadian gene regulation. *Nucleic Acids Res.* 45: 5720-5738.
 17. Yao, X., Wang, X., Hu, X., Liu, Z., Liu, J., Zhou, H., Shen, X., Wei, Y., Huang, Z., Ying, W., Wang, Y., Nie, Y., Zhang, C., Li, S., Cheng, L., Wang, Q., Wu, Y., Huang, P., **Sun, Q.***, **Shi, L.***, and **Yang, H.*** (2017) Homology-mediated end joining-based targeted integration using CRISPR/Cas9. *Cell Res.* 27: 801-814.
 18. Wang, L., Li, M., Qu, C., Miao, W., Yin, Q., Liao, J., Cao, H., Huang, M., Wang, K., Zuo, E., Peng, G., Zhang, S., Chen, G., Li, Q., Tang, K., Yu, Q., Li, Z., Wong, C., Xu, G., Jing, N., **Yu, X.***, and Li, J.* (2017) CRISPR-Cas9-mediated genome editing in one blastomere of two-cell embryos reveals a novel Tet3 function in regulating neocortical development. *Cell Res.* 27: 815-829.
 19. Li, M., Miao, W., Wu, Q., He, S., Yan, G., Yang, Y., Liu, J., Taketo, M., and **Yu, X.*** (2017) A critical role of presynaptic Cadherin/Catenin/p140cap complexes in stabilizing spines and functional synapses in the neocortex. *Neuron* 94: 1155-1172.
 20. Yao, X., Wang, X., Liu, J., Hu, X., Shi, L., Shen, X., Ying, W., Sun, X., Wang, X., Huang, P.*, and **Yang, H.*** (2017) CRISPR/Cas9 - mediated precise targeted integration in vivo using a double cut donor with short homology arms. *EBioMedicine* 20: 19-26.
 21. Xu, B., Zhang, Y., Du, X., Li, J., Zi, H., Bu, J., Yan, Y., Han, H., and **Du, J.*** (2017) Neurons secrete miR-132-containing exosomes to regulate brain vascular integrity. *Cell Res.* 27: 882-897.

22. Zuo, E., Cai, Y., Li, K., Wei, Y., Wang, B., Sun, Y., Liu, Z., Liu, J., Hu, X., Wei, W., Huo, X., Shi, L., Tang, C., Liang, D., Wang, Y., Nie, Y., Zhang, C., Yao, X., Wang, X., Zhou, C., Ying, W., Wang, Q., Chen, R., Shen, Q., Xu, G., Li, J., **Sun, Q.***, **Xiong, Z.*** and **Yang, H.*** (2017) One-step generation of complete gene knockout mice and monkeys by CRISPR/Cas9-mediated gene editing with multiple sgRNAs. *Cell Res.* 27: 933-945.
23. Zhou, T., Zhu, H., Fan, Z., Wang, F., Chen, Y., Liang, H., Yang, Z., Zhang, L., Lin, L., Zhan, Y., Wang, Z., and Hu, H.* (2017) History of winning remodels thalamo-PFC circuit to reinforce social dominance. *Science* 357: 162-168.
24. Yu, G., Yang, M., Yu, P., and **Dorris M.*** (2017) Time compression of visual perception around microsaccades. *J. Neurophysiol.* 118: 416-424.
25. Tang, X., Gao, J., Jia, X., Zhao, W., Zhang, Y., Pan, W., and **He, J.*** (2017) Bipotent progenitors as embryonic origin of retinal stem cells. *J. Cell. Biol.* 216: 1833-1847.
26. Liu, H., Sang, S., Lu, Y., Wang, Z., **Yu, X.***, and Zhong, C.* (2017) Thiamine metabolism is critical for regulating correlated growth of dendrite arbors and neuronal somata. *Sci. Rep.* 7: 5342.
27. Zhang, D., Yu, B., Liu, J., Jiang, W., Xie, T., Zhang, R., Tong, D., Qiu, Z. and **Yao, H.*** (2017) Altered visual cortical processing in a mouse model of MECP2 duplication syndrome. *Sci. Rep.* 7: 6468.
28. Yin, D., Liu, W., Zeljic, K., Lv, Q., Wang, Z., You, M., Men, W., Fan, M., Cheng, W.*, and **Wang, Z.*** (2017) Failure in cognitive suppression of negative affect in adolescents with generalized anxiety disorder. *Sci. Rep.* 7: 6583.
29. Wu, D., Deng, H., Xiao, X., Zuo, Y., Sun, J. and **Wang, Z.*** (2017) Persistent neuronal activity in anterior cingulate cortex correlates with sustained attention in rats regardless of sensory modality. *Sci. Rep.* 7: 43101.
30. Mu, D., Deng, J., Liu, K., Wu, Z., Shi, Y., Guo, W., Mao, Q., Liu, X., Li, H., and **Sun, Y.*** (2017) A central neural circuit for itch sensation. *Science* 357: 695-699.
31. Lv, Q., Wang, Z., Zhang, C., Fan, Q., Zeljic, K., Sun, B., Xiao, Z.*, and **Wang, Z.*** (2017) Divergent structural responses to pharmacological interventions in orbitofronto-striato-thalamic and premotor circuits in obsessive-compulsive disorder. *EBioMedicine* 22: 242-248.
32. Wen, Z., Cheng, T., Li, G., Sun, S., Yu, S., Zhang, Y.*, Du, Y.*, and **Qiu, Z.*** (2017) Identification of autism-related MECP2 mutations by whole exome sequencing and functional validation. *Mol. Autism* 8: 43.
33. Yang, K., Yu, B., Cheng, C., Cheng, T., Yuan, B., Li, K., Xiao, J., **Qiu, Z.***, and Zhou, Y.* (2017) Mir505-3p regulates axonal development via inhibiting the autophagy pathway by

- targeting Atg12. *Autophagy* 13: 1679-1696.
34. Tian, Y., Yang, C., Shang, S., Cai, Y., Deng, X., Zhang, J., Shao, F., Zhu, D., Liu, Y., Chen, G., Liang, J.*, **Sun, Q.***, **Qiu, Z.***, and Zhang, C.* (2017) Loss of FMRP impaired hippocampal long-term plasticity and spatial learning in rats. *Front. Mol. Neurosci.* 10: 269.
 35. Mu, D., and **Sun, Y.*** (2017) Itch induces conditioned place aversion in mice. *Neurosci. Lett.* 658: 91-96.
 36. Yang, Y., Qin, M., Bao, P., Xu, W., and **Xu, J.*** (2017) Secretory carrier membrane protein 5 is an autophagy inhibitor that promotes the secretion of α -synuclein via exosome. *PLoS One* 12: e0180892.
 37. Han, Y., Li, X., Wang, S., Wei, Y., and **Xu, X.*** (2017) Presence of pups suppresses hunger-induced feeding in virgin adult mice of both sexes. *Neuroscience* 362: 228-238.
 38. Cong, L., Wang, Z., Chai, Y., Hang, W., Shang, C., Yang, W., Bai, L., Du, J., **Wang, K.***, and Wen, Q.* (2017) Rapid whole brain imaging of neural activity in freely behaving larval zebrafish (*Danio rerio*). *Elife* 6: e28158.
 39. Yin, J., Gao, G., Liu, X., Hao, Z., Li, K., Kang, X., Li, H., Shan, Y., Hu, W., Li, H., and **Cai, S.*** (2017) Genetic variation in glia–neuron signalling modulates ageing rate. *Nature* 551: 198-203.
 40. Zuo, E., Huo, X., Yao, X., Hu, X., Sun, Y., Yin, J., He, B., Wang, X., Shi, L., Ping, J., Wei, Y., Ying, W., Wei, W., Liu, W., Tang, C., Li, Y., Hu, J.* and **Yang, H.*** (2017) CRISPR/Cas9-mediated targeted chromosome elimination. *Genome Biol.* 18: 224.
 41. Yang, L., and **Gu, Y.*** (2017) Distinct spatial coordinate of visual and vestibular heading signals in macaque FEFsem and MSTd. *eLife* 6: e29809.
 42. Lu, S., and **Zhou, J.*** (2017) Finding the 'guilty' gene variant of sporadic parkinson's disease via CRISPR/Cas9. *Neurosci. Bull.* 33: 115-117. (Research Highlight)
 43. **Yu, X.***, **Qiu, Z.***, and Zhang, D.* (2017) Recent research progress in autism spectrum disorder. *Neurosci. Bull.* 33: 125-129. (Review)
 44. **Qiu, Z.***, and Li, X. (2017) Non-human primate models for brain disorders - towards genetic manipulations via innovative technology. *Neurosci. Bull.* 33: 247-250. (Review)
 45. Liu, Z., Cai, Y., and **Sun, Q.*** (2017) Genome editing of monkey. *Methods Mol. Biol.* 1630: 141-152. (Review)
 46. Savtchenko, L., **Poo, M.**, and Rusakov, D.* (2017) Electrodifusion phenomena in neuroscience: a neglected companion. *Nat. Rev. Neurosci.* 18: 598-612. (Review)
 47. Li, K., Cai, B., Li, C., and **Zhang, X.*** (2017) Presynaptic inhibition of nociceptive neurotransmission by somatosensory neuron-secreted suppressors. *Sci. China Life Sci.* 60: 1013-1018. (Review)

48. Wei, Y., Wang, S., and **Xu, X.*** (2017) Sex differences in brain-derived neurotrophic factor signaling: Functions and implications. *J. Neurosci. Res.* 95: 336-344. (Review)
49. Liu, F., and **Chang, H.*** (2017) Physiological links of circadian clock and biological clock of aging. *Protein Cell* 8: 477-488. (Review)
50. **Qiu, Z.*** (2017) Deciphering MECP2-associated disorders: disrupted circuits and the hope for repair. *Curr. Opin. Neurobiol.* 48: 30-36. (Review)
51. Zhou, C., Zhang, M., Wei, Y., Sun, Y., Sun, Y., Pan, H., Yao, N., Zhong, W., Li, Y., Li, W.*, **Yang, H.***, Chen, Z.* (2017). Highly efficient base editing in human tripronuclear zygotes. *Protein Cell* 8:772–775.

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