

ION Publication List

(2018.01-2018.12)

1. Wang, Z., Zeljic, K., Jiang, Q., Gu, Y., Wang, W., and **Wang, Z.*** (2018) Dynamic network communication in the human functional connectome predicts perceptual variability in visual illusion. *Cereb. Cortex* 28: 48-62.
2. **Wang, W.***, Andolina, I.*, Lu, Y., Jones, H., and Sillito, A. (2018) Focal gain control of thalamic visual receptive fields by layer 6 corticothalamic feedback. *Cereb. Cortex* 28: 267-280.
3. Wei, Y., Wang, S., Jiao, Z., Zhang, W., Lin, J., Li, X., Li, S., Zhang X., and **Xu, X.*** (2018) Medial preoptic area in mice is capable of mediating sexually dimorphic behaviors regardless of gender. *Nat. Commun.* 9: 279.
4. Li Y., Wang, Y., and **Cui, H.*** (2018) Eye-hand coordination during flexible manual interception of an abruptly appearing, moving target. *J. Neurophysiol.* 119: 221-234.
5. Tan, G., Liu, Y., Wang, L., Li, K., Zhang, Z., Li, H., Yang, Z., Li, Y., Li, D., Wu, M., Yu, C., Long, J., Chen, R., Li, L., Yin, L., Liu, J., Cheng, X., Shen, Q., Shu, Y., Sakimura, K., Liao, L., Wu, Z., and **Xiong, Z.*** (2018) PRRT2 deficiency induces paroxysmal kinesigenic dyskinesia by regulating synaptic transmission in cerebellum. *Cell Res.* 28: 90-110.
6. Yu, X., Hou, H., Spillmann, L., and **Gu, Y.*** (2018) Causal evidence of motion signals in macaque middle temporal area weighted-pooled for global heading perception. *Cereb. Cortex* 28: 612-624.
7. Li, X., Yu, B., Sun, Q., Zhang, Y., Ren, M., Zhang, X., Li, A., Yuan, J., Madisen, L., Luo, Q., Zeng, H., Gong, H.* and **Qiu, Z.*** (2018) Generation of a whole-brain atlas for the cholinergic system and mesoscopic projectome analysis of basal forebrain cholinergic neurons. *Proc. Natl. Acad. Sci. USA.* 115: 415-420.
8. Liu, Z., Cai, Y., Wang, Y., Nie, Y., Zhang, C., Xu, Y., Zhang, X., Lu, Y., Wang, Z., Poo, M., and **Sun, Q.*** (2018) Cloning of macaque monkeys by somatic cell nuclear transfer. *Cell* 172, 881-887.
9. Yao, X., Liu, Z., Wang, X., Wang, Y., Nie, Y., Lai, L., Sun, R., Shi, L., **Sun, Q.***, and **Yang, H.*** (2018) Generation of knock-in cynomolgus monkey via CRISPR/Cas9 editing. *Cell Res.* 28: 379-382.
10. Zhou, H., Liu, J., Zhou, C., Gao, N., Rao, Z., Li, H., Hu, X., Li, C., Yao, X., Shen, X., Sun, Y., Wei, Y., Liu, F., Ying, W., Zhang, J., Tang, C., Zhang, X., Xu, H., Shi, L., Cheng, L., Huang, P.*, and **Yang, H.*** (2018) In vivo simultaneous transcriptional activation of multiple genes in

- the brain using CRISPR–dCas9-activator transgenic mice. *Nat. Neurosci.* 21: 440-446.
11. Dang, T., Duan, W., Yu, B., Tong, D., Cheng, C., Zhang, Y., Wu, W., Ye, K., Zhang, W., Wu, M., Wu, B., An, Y., **Qiu, Z.***, and Wu, B.* (2018) Autism-associated Dyrk1a truncation mutants impair neuronal dendritic and spine growth and interfere with postnatal cortical development. *Mol. Psychiatr.* 23: 747-758.
 12. Zhang, Z., Cheng, Z., Lin, Z., Nie, C., **Yang, T.*** (2018) A neural network model for the orbitofrontal cortex and task space acquisition during reinforcement learning. *PLOS Comput. Biol.* 14: e1005925.
 13. Han, Z., Zhang, X., Zhu, J., Chen, Y., and **Li, C.*** (2018) High-throughput automatic training system for odor-based learned behaviors in head-fixed mice. *Front. Neural Circuits* 12: 15.
 14. Tian, Y., Yang, C., Cui, Y., Su, F., Wang, Y., Wang, Y., Yuan, P., Shang, S., Li, H., Zhao, J., Zhu, D., Tang, S., Cao, P., Liu, Y., Wang, X., Wang, L., Zeng, W., Jiang, H., Zhao, F., Luo, M., Xiong, W., **Qiu, Z.***, Li, X.* , and Zhang, C.* (2018) An excitatory neural assembly encodes short-term memory in the prefrontal cortex. *Cell Rep.* 22: 1734-1744.
 15. Xie, Y., Nie, C., **Yang, T.*** (2018) Covert shift of attention modulates the value encoding in the orbitofrontal. *eLife* 7: e31507.
 16. Lu, Y., Yin, J., Chen, Z., Gong, H., Liu, Y., Qian, L., Li, X., Liu, R., Andolina, I., and **Wang, W.*** (2018) Revealing detail along the visual hierarchy: neural clustering preserves acuity from V1 into V4. *Neuron* 98: 417-428.
 17. Li, F., Jiang, W., Wang, T., Xie, T., and **Yao, H.*** (2018) Phase-specific surround suppression in mouse primary visual cortex correlates with figure detection behavior based on phase discontinuity. *Neurosci.* 379: 359-374.
 18. Yao, X., Wang, X., Liu, J., Shi, L., Huang, P.*, and **Yang, H.*** (2018) CRISPR/Cas9-mediated targeted integration in vivo using a homology-mediated end joining-based strategy. *J. Vis. Exp.* 133: e56844.
 19. Yao, X.*, Zhang, M., Wang, X., Ying, W., Hu, X., Dai, P., Meng, F., Shi, L., Sun, Y., Yao, N., Zhong, W., Li, Y., Wu, K., Li, W.*, Chen, Z.*, and **Yang, H.*** (2018) Tild-CRISPR allows for efficient and precise gene knockin in mouse and human cells. *Dev. Cell* 45: 526-536.
 20. Zhang, Q., Li, H., Chen, M., Guo, A., **Wen, Y.***, and **Poo, M.*** (2018) Functional organization of intrinsic and feedback presynaptic inputs in the primary visual cortex. *Proc. Natl. Acad. Sci. USA.* 115: E5174-E5182.
 21. Li, C., Shu, Y., Wang, G., Zhang, H., Lu, Y., Li, X., Li, G., Song, L., and **Liu, Z.*** (2018) Characterizing a novel vGlut3-P2A-iCreER knockin mouse strain in cochlea. *Hearing Res.* 364: 12-24.
 22. Jiang, X., Long, T., Cao, W., Li, J., Dehaene, S., and **Wang, L.*** (2018) Production of

- supra-regular spatial sequences by macaque monkeys. *Curr. Biol.* 28: 1851-1859.
23. Zhu, Z., Liu, J., Li, K., Zheng, J., and **Xiong, Z.*** (2018) KPNB1 inhibition disrupts proteostasis and triggers unfolded protein response-mediated apoptosis in glioblastoma cells. *Oncogene* 37: 2936-2952.
 24. Liu, Z., Lu, Z., Yang, G., Huang, S., Li, G., Feng, S., Liu, Y., Li, J., Yu, W., Zhang, Y., Chen, J., **Sun, Q.*** and Huang, X.* (2018) Efficient generation of mouse models of human diseases via ABE- and BE-mediated base editing. *Nat. Commun.* 9: 2338.
 25. Cheng, T.*, and **Qiu, Z.*** (2018) Long non-coding RNA tagging and expression manipulation via CRISPR/Cas9-mediated targeted insertion. *Protein Cell* 9: 820-825.
 26. Hu, C., Xu, X.*, Xiong, G., Xu, Q., Zhou, B., Li, C., Qin, Q., Liu, C., Li, H., Sun, Y.*, and **Yu, X.*** (2018) Alterations in plasma cytokine levels in chinese children with autism spectrum disorder. *Autism Res.* 11: 989-999.
 27. Zhou, N., Qin, S., Liu, Y., Tang, L., Zhao, W., Pan, C., **Qiu, Z.***, Wang, X.*, and Shu, X.* (2018) Whole-exome sequencing identifies rare compound heterozygous mutations in the MYBPC3 gene associated with severe familial hypertrophic cardiomyopathy. *Eur. J. Med. Genet.* 61: 434-441.
 28. Yao, X., Cheng, X., Wang, C., Zhao, M., Guo, X., Su, H., Lai, L., Zou, X., Chen, X., Zhao, Y., Dong, E., Lu, Y., Wu, S., Li, X., Fan, G., Yu, H., Xu, J., Wang, N.*, **Xiong, Z.***, and Chen, W.* (2018) Biallelic mutations in MYORG cause autosomal recessive primary familial brain calcification. *Neuron* 98: 1116-1123.
 29. Xu, W., and **Xu, J.*** (2018) C9orf72 dipeptide repeats cause selective neurodegeneration and cell-autonomous excitotoxicity in Drosophila glutamatergic neurons. *J. Neurosci.* 38: 7741-7752.
 30. Du, W., Zhang, R.*, Li, J., Zhang, B., Peng, X., Cao, S., Yuan, J., Yuan, C., Yu, T.*, and **Du, J.*** (2018) The locus coeruleus modulates intravenous general anesthesia of zebrafish via a cooperative mechanism. *Cell Rep.* 24: 3146-3155.
 31. Zhang, Y., Xu, B., Chen, Q., Yan, Y., and **Du, J.***, and **Du X.*** (2018) Apoptosis of endothelial cells contributes to brain vessel pruning of zebrafish during development. *Front. Mol. Neurosci.* 11: 222.
 32. Jiang, Q., Li, K., Lu, W., Li, S., Chen, X., Liu, X., Yuan, J., Ding, Q., Lan, F.*, and **Cai, S.*** (2018) Identification of small-molecule ion channel modulators in C. elegans channelopathy models. *Nat. Commun.* 9: 3941.
 33. Hu, J., Ma, H., Zhu, S., Li, P., Xu, H., Fang, Y., Chen, M., Han, C., Fang, C., Cai, X., Yan, K., and Lu, H.* (2018) Visual motion processing in macaque V2. *Cell Rep.* 25: 157-167.
 34. Duan, L., Zhang, X., Miao, W., Sun, Y., Xiong, G., Wu, Q., Li, G., Yang, P., Yu, H., Li, H.,

- Wang, Y., Zhang, M., Hu, L., Tong, X., Zhou, W., and **Yu, X.*** (2018) PDGFR β cells rapidly relay inflammatory signal from the circulatory system to neurons via chemokine CCL2. *Neuron* 100: 183-200.
35. Zhang, T., Jiang, X., Xu, M., Wang, H., Sang, X., Qin, M., Bao, P., Wang, R., Zhang, C., Lu, H., Li, Y., Ren, J., Chang, H., Yan, J., **Sun, Q.***, and **Xu, J.*** (2018) Sleep and circadian abnormalities precede cognitive deficits in R521C FUS knockin rats. *Neurobiol. Aging* 72: 159-170.
 36. Bai, X., Li, K., Yao, L., Kang, X., and **Cai, S.*** (2018) A forward genetic screen identifies chaperone CNX-1 as a conserved biogenesis regulator of ERG K⁺ channels. *J. Gen. Physiol.* 150: 1189-1201.
 37. Su, J., Huang, P., Qin, M., Lu, Q., Sang, X., Cai, Y., Wang, Y., Liu, F., Wu, R., Wang, X., Jiang, X., Wang, J., Sun, Q., Chen, S.*, and **Xu, J.*** (2018) Reduction of HIP2 expression causes motor function impairment and increased vulnerability to dopaminergic degeneration in Parkinson's disease models. *Cell Death Dis.* 9: 1020.
 38. Yu, X., and **Gu Y.*** (2018) Probing sensory readout via combined choice-correlation measures and microstimulation perturbation. *Neuron* 100: 715-727.
 39. Yuan, L., Liang, T., Deng, J. and **Sun, Y.*** (2018) Dynamics and functional role of dopaminergic neurons in the ventral tegmental area during itch processing. *J. Neurosci.* 38: 9856-9869.
 40. Jiang, X., Zhang, T., Wang, H., Wang, T., Qin, M., Bao, P., Wang, R., Liu, Y., Chang, H., Yan, J. and **Xu, J.*** (2018) Neurodegeneration-associated FUS is a novel regulator of circadian gene expression. *Transl. Neurodegener.* 7: 24.
 41. Yao, J., Zhang, Q., Liao, X., Li, Q., Liang, S., Li, X., Zhang, Y., Li, X., Wang, H., Qin, H., Wang, M., Li, J., Zhang, J., He, W., Zhang, W., Li, T., Xu, F., Gong, H., Jia, H., **Xu, X.***, Yan, J.*, and Chen, X.* (2018) A corticopontine circuit for initiation of urination. *Nat. Neurosci.* 21: 1541-1550.
 42. Jiao, Z., Shang, C.*, Wang, Y., Yang, Z., Yang, C., Li, F., Xie, J., Pan, J., Fu, L.*, and **Du, J.*** (2018) All-optical imaging and manipulation of whole-brain neuronal activities in behaving larval zebrafish. *Biomed. Opt. Express* 9: 6154-6169.
 43. Yin, D., Zhang, C., Lv, Q., Chen, X., Zeljic, K., Gong, H., Zhan, S., Jin, H., **Wang, Z.***, and Sun, B.* (2018) Dissociable frontostriatal connectivity: mechanism and predictor of the clinical efficacy of capsulotomy in obsessive-compulsive disorder. *Biol. Psychiat.* 84: 926-936.
 44. Chen, X., Zhang, C., Li, Y., Lv, Q., Zeljic, K., Huang, P., Jin, H., Chen, S., Sun, B.*, and **Wang, Z.*** (2018) Functional connectivity-based modelling simulates subject-specific

- network effects of focal brain stimulation. *Neurosci. Bull.* 34: 921-938.
45. Zhang, Y., Yan, A., Liu, B., Wan, Y., Zhao, Y., Liu, Y., Tan, J., Song, L., **Gu, Y.*** and Liu, Z.* (2018) Oculomotor performances are associated with motor and non-motor symptoms in parkinson's disease. *Front. Neurol.* 9: 960.
 46. **Wang, L.***, Amalric, M., Fang, W., Jiang X., Pallier, C., Figueira, S., Sigman, M., and Dehaene, S*. (2018) Representation of spatial sequences using nested rules in human prefrontal cortex. *Neuroimage* 186: 245-255.
 47. Zhang, J., Chang, S., Xu, P., Miao, M., Wu, H., Zhang, Y., Zhang, T., Wang, H., Zhang, J., Xie, C., Song, N., Luo, C. *, Zhang, X. *, and **Zhu, S.*** (2018) Structural basis of the proton sensitivity of human GluN1-GluN2A NMDA receptors. *Cell Rep.* 25: 3582-3590.
 48. Zhang, H., Pan, H., Zhou, C., Wei, Y., Ying, W., Li, S., Wang, G, Li, C., Ren, Y., Li, G, Ding, X., Sun, Y., Li, G, Song, L., Li, Y., **Yang, H.***, and **Liu, Z.*** (2018) Simultaneous zygotic inactivation of multiple genes in mouse through CRISPR/Cas9-mediated base editing. *Development* 145: 20.
 49. **Qiu, Z.*** (2018) Deciphering MECP2-associated disorders: disrupted circuits and the hope for repair. *Curr. Opin. Neurobiol.* 48: 30-36. (Review)
 50. Li, C., Wang, S., Chen, Y., and **Zhang, X.*** (2018) Somatosensory neuron typing with high-coverage single-cell RNA sequencing and functional analysis. *Neurosci. Bull.* 34: 200-207. (Review)
 51. **Zhou, J.*** (2018) Global Neuroscience: China. *ACS Chem. Neurosci.* 9: 138-139. (Editorial)
 52. **Duan, C.***, Pan, Y., and **Yu, G.*** (2018) Onset matters: how collicular activity relates to saccade initiation during cortical cooling. *J. Neurosci.* 38: 3616-3618. (Review)
 53. **Gu, Y.*** (2018) Vestibular signals in primate cortex for self-motion perception. *Curr. Opin. Neurobiol.* 52: 10-17. (Review)
 54. Cheng, Z. and **Gu, Y.*** (2018) Vestibular system and self-motion. *Front. Cell. Neurosci.* 12: 456. (Review)

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