

# Featured Publications

(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. 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.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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.
10. 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.
11. 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.
  12. Xie, Y., Nie, C., **Yang, T.\*** (2018) Covert shift of attention modulates the value encoding in the orbitofrontal. *eLife* 7: e31507.
  13. 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.
  14. 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.
  15. 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.
  16. 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.
  17. 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.
  18. 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.
  19. 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.
  20. 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.
  21. 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.
22. 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.
  23. 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.
  24. 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 $\beta$  cells rapidly relay inflammatory signal from the circulatory system to neurons via chemokine CCL2. *Neuron* 100: 183-200.
  25. Yu, X., and **Gu Y.\*** (2018) Probing sensory readout via combined choice-correlation measures and microstimulation perturbation. *Neuron* 100: 715-727.
  26. 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.
  27. 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.
  28. 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.
  29. 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.
  30. **Qiu, Z.\*** (2018) Deciphering MECP2-associated disorders: disrupted circuits and the hope for repair. *Curr. Opin. Neurobiol.* 48: 30-36. (Review)
  31. **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)
  32. **Gu, Y.\*** (2018) Vestibular signals in primate cortex for self-motion perception. *Curr. Opin. Neurobiol.* 52: 10-17. (Review)

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