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Education2001 - 2007 **Ph.D.** Physiology and Biophysics, University of Southern California. Los Angeles, USA.1996 - 2001 **B.S.** Biology, University of Science & Technology of China (USTC), Hefei, China.**Employment and Research Experience**

2015 - Assistant Professor of Neuroscience & BIO5 Fellow, University of Arizona

2008 - 2015 Postdoctoral fellow, David J Anderson lab, HHMI & California Institute of Technology

2001 - 2007 Graduate Research Assistant, Robert H Chow lab, University of Southern California

Selected Awards and Memberships

2017 - 2019 NARSAD Young Investigator Award, The Brain and Behavior Research Foundation

2011 - 2014 NARSAD Young Investigator Award, The Brain and Behavior Research Foundation

2010 - 2013 The Hilda and Preston Davis Foundation Postdoctoral Fellowship Award

2010 - Sigma Xi The Scientific Research Society

2007 - Society for Neuroscience

2003 - American Association for the Advancement of Science (AAAS)

Publications2020. Zhang-Molina C, Schmit MB, **Cai H**. Neural Circuit Mechanism Underlying the Feeding Controlled by Insula-Central Amygdala Pathway. **iScience**. 2020 Apr 5;23(4):101033. doi: 10.1016/j.isci.2020.101033. [Epub ahead of print] PubMed PMID: 32311583; PubMed Central PMCID: PMC7168768.2020. Burton A, Obaid SN, Vázquez-Guardado A, Schmit MB, Stuart T, Cai L, Chen Z, Kandela I, Haney CR, Waters EA, **Cai H**, Rogers JA, Lu L, Gutruf P. Wireless, battery-free subdermally implantable photometry systems for chronic recording of neural dynamics. **Proc Natl Acad Sci U S A**. 2020 Jan 23;. doi: 10.1073/pnas.1920073117. [Epub ahead of print] PubMed PMID: 31974306.2019. Wang Y, Kim J, Schmit MB, Cho TS, Fang C, **Cai H**. A bed nucleus of stria terminalis microcircuit regulating inflammation-associated modulation of feeding. **Nat Commun**. 2019 Jun 24;10(1):2769. doi: 10.1038/s41467-019-10715-x. PubMed PMID: 31235690; PubMed Central PMCID: PMC6591327.- This work highlighted in *Science Daily*, *EurekAlert*, *KGUN 9 TV News*, *AZPM(NPR) News*, *Neuroscience News*, *Daily Mail* and numerous other journals or media.2019. Tian X, Tu X, Della Croce K, Yao G, **Cai H**, Brock N, Pau S, Liang R. Multi-wavelength quantitative polarization and phase microscope. **Biomed Opt Express**. 2019 Apr 1;10(4):1638-1648. doi: 10.1364/BOE.10.001638. eCollection 2019 Apr 1. PubMed PMID: 31061760; PubMed Central PMCID: PMC6484989.2015. Kunwar PS, Zelikowsky M, Remedios R, **Cai H**, Yilmaz M, Meister M, Anderson DJ. Ventromedial hypothalamic neurons control a defensive emotion state. **Elife**. 2015 Mar 6;4. doi: 10.7554/eLife.06633. PubMed PMID: 25748136; PubMed Central PMCID: PMC4379496.2014. **Cai H**, Haubensak W, Anthony TE, Anderson DJ. Central amygdala PKC- δ (+) neurons mediate the influence of multiple anorexigenic signals. **Nat Neurosci**. 2014 Sep;17(9):1240-8. doi: 10.1038/nn.3767. Epub 2014 Jul 27. PubMed PMID: 25064852; PubMed Central PMCID: PMC4146747.

- This work has been highlighted in *Nature Review Neuroscience* (2014, 15:564), *The New York Times*, *BBC News*, *Los Angeles Times*, *CBS TV News*, *Science Update Radio News*, and numerous other journals or media.
2013. Lin MY, Rohan JG, **Cai H**, Reim K, Ko CP, Chow RH. Complexin facilitates exocytosis and synchronizes vesicle release in two secretory model systems. *J Physiol*. 2013 May 15;591(10):2463-73. doi: 10.1113/jphysiol.2012.244517. Epub 2013 Feb 11. PubMed PMID: 23401610; PubMed Central PMCID: PMC3678037.
2010. Haubensak W, Kunwar PS*, **Cai H***, Ciochi S*, Wall NR, Ponnusamy R, Biag J, Dong HW, Deisseroth K, Callaway EM, Fanselow MS, Lüthi A, Anderson DJ. Genetic dissection of an amygdala microcircuit that gates conditioned fear. *Nature*. 2010 Nov 11;468(7321):270-6. doi: 10.1038/nature09553. PubMed PMID: 21068836; PubMed Central PMCID: PMC3597095.* equal contribution.
- This work has been highlighted in *Nature Review Neuroscience* (2011, 12:2), *Faculty of 1000*, *The Scientist*, *Science Daily*, and many other journals or media.
2009. Xiao C, Nashmi R, McKinney S, **Cai H**, McIntosh JM, Lester HA. Chronic nicotine selectively enhances alpha4beta2* nicotinic acetylcholine receptors in the nigrostriatal dopamine pathway. *J Neurosci*. 2009 Oct 7;29(40):12428-39. doi: 10.1523/JNEUROSCI.2939-09.2009. PubMed PMID: 19812319; PubMed Central PMCID: PMC2787412.
2008. **Cai H**, Reim K, Varoqueaux F, Tapechum S, Hill K, Sørensen JB, Brose N, Chow RH. Complexin II plays a positive role in Ca²⁺-triggered exocytosis by facilitating vesicle priming. *Proc Natl Acad Sci U S A*. 2008 Dec 9;105(49):19538-43. doi: 10.1073/pnas.0810232105. Epub 2008 Nov 25. PubMed PMID: 19033464; PubMed Central PMCID: PMC2614796.
2007. Kolski-Andreaco A, **Cai H**, Curre DS, Chandy KG, Chow RH. Mouse adrenal chromaffin cell isolation. *J Vis Exp*. 2007 Jan 5;(2):129. doi: 10.3791/129. PubMed PMID: 18830430; PubMed Central PMCID: PMC2532942.
2006. Michael DJ, **Cai H**, Xiong W, Ouyang J, Chow RH. Mechanisms of peptide hormone secretion. *Trends Endocrinol Metab*. 2006 Dec;17(10):408-15. doi: 10.1016/j.tem.2006.10.011. Epub 2006 Nov 3. Review. PubMed PMID: 17084640.
2003. Bao L, Jin SX, Zhang C, Wang LH, Xu ZZ, Zhang FX, Wang LC, Ning FS, **Cai HJ**, Guan JS, Xiao HS, Xu ZQ, He C, Hökfelt T, Zhou Z, Zhang X. Activation of delta opioid receptors induces receptor insertion and neuropeptide secretion. *Neuron*. 2003 Jan 9;37(1):121-33. PubMed PMID: 12526778.
2002. Bao L, Wang HF, **Cai HJ**, Tong YG, Jin SX, Lu YJ, Grant G, Hökfelt T, Zhang X. Peripheral axotomy induces only very limited sprouting of coarse myelinated afferents into inner lamina II of rat spinal cord. *Eur J Neurosci*. 2002 Jul;16(2):175-85. doi: 10.1046/j.1460-9568.2002.02080.x. PubMed PMID: 12169100.