# Associate Professor Yiwen Zheng Selected Publications

### **Journal - Research Article**

Aitken, P., Zheng, Y., & Smith, P. F. (2018). The modulation of hippocampal theta rhythm by the vestibular system. Journal of Neurophysiology, 119(2), 548-562. [doi: 10.1152/jn.00548.2017](http://dx.doi.org/10.1152/jn.00548.2017)

Zheng, Y., Gliddon, C. M., Aitken, P., Stiles, L., Machado, M.-L., Philoxene, B., … Smith, P. F., & Besnard, S. (2017). Effects of acute altered gravity during parabolic flight and/or vestibular loss on cell proliferation in the rat dentate gyrus. Neuroscience Letters, 654, 120-124. [doi: 10.1016/j.neulet.2017.06.033](http://dx.doi.org/10.1016/j.neulet.2017.06.033)

He, J., Zhu, Y., Aa, J., Smith, P. F., De Ridder, D., Wang, G., & Zheng, Y. (2017). Brain metabolic changes in rats following acoustic trauma. Frontiers in Neuroscience, 11, 148. [doi: 10.3389/fnins.2017.00148](http://dx.doi.org/10.3389/fnins.2017.00148)

Balabhadrapatruni, S., Zheng, Y., Napper, R., & Smith, P. F. (2016). Basal dendritic length is reduced in the rat hippocampus following bilateral vestibular deafferentation. Neurobiology of Learning & Memory, 131, 56-60. [doi: 10.1016/j.nlm.2016.03.009](http://dx.doi.org/10.1016/j.nlm.2016.03.009)

Smith, P. F., & Zheng, Y. (2016). Cannabinoids, cannabinoid receptors and tinnitus. Hearing Research, 332, 210-216. [doi: 10.1016/j.heares.2015.09.014](http://dx.doi.org/10.1016/j.heares.2015.09.014)

Zheng, Y., Reid, P., & Smith, P. F. (2015). Cannabinoid CB1 receptor agonists do not decrease, but may increase, acoustic trauma-induced tinnitus in rats. Frontiers in Neurology, 6, 60. [doi: 10.3389/fneur.2015.00060](http://dx.doi.org/10.3389/fneur.2015.00060)

Zheng, Y., McPherson, K., Reid, P., & Smith, P. F. (2015). The anti-inflammatory selective melanocortin receptor subtype 4 agonist, RO27-3225, fails to prevent acoustic trauma-induced tinnitus in rats. European Journal of Pharmacology, 761, 206-210. [doi: 10.1016/j.ejphar.2015.05.007](http://dx.doi.org/10.1016/j.ejphar.2015.05.007)

Zheng, Y., Stiles, L., Chien, Y.-T., Darlington, C. L., & Smith, P. F. (2014). The effects of acute stress-induced sleep disturbance on acoustic trauma-induced tinnitus in rats. BioMed Research International, 2014, 724195. [doi: 10.1155/2014/724195](http://dx.doi.org/10.1155/2014/724195)

Zheng, Y., Geddes, L., Sato, G., Stiles, L., Darlington, C. L., & Smith, P. F. (2014). Galvanic vestibular stimulation impairs cell proliferation and neurogenesis in the rat hippocampus but not spatial memory. Hippocampus, 24(5), 541-552. [doi: 10.1002/hipo.22247](http://dx.doi.org/10.1002/hipo.22247)

Smith, P. F., & Zheng, Y. (2014). Cannabis, cannabinoids and tinnitus. Journal of Pharmacology & Drug Metabolism, 1, 1-6. Retrieved from <http://www.jscholaronline.org/journals/journal-of-pharmacology-and-drug-metabolism/jhome.php>

Zheng, Y., McPherson, K., & Smith, P. F. (2014). Effects of early and late treatment with L-baclofen on the development and maintenance of tinnitus caused by acoustic trauma in rats. Neuroscience, 258, 410-421. [doi: 10.1016/j.neuroscience.2013.11.032](http://dx.doi.org/10.1016/j.neuroscience.2013.11.032)

Smith, P. F., & Zheng, Y. (2013). From ear to uncertainty: Vestibular contributions to cognitive function. Frontiers in Integrative Neuroscience, 7, 84. [doi: 10.3389/fnint.2013.00084](http://dx.doi.org/10.3389/fnint.2013.00084)

Zheng, Y., Wilson, G., Stiles, L., & Smith, P. F. (2013). Glutamate receptor subunit and calmodulin kinase II expression, with and without T maze training, in the rat hippocampus following bilateral vestibular deafferentation. PLoS ONE, 8(2), e54527. [doi: 10.1371/journal.pone.0054527](http://dx.doi.org/10.1371/journal.pone.0054527)

Zheng, Y., McNamara, E., Stiles, L., Darlington, C. L., & Smith, P. F. (2012). Evidence that memantine reduces chronic tinnitus caused by acoustic trauma in rats. Frontiers in Neurology, 3, 127. [doi: 10.3389/fneur.2012.00127](http://dx.doi.org/10.3389/fneur.2012.00127)

Neo, P., Carter, D., Zheng, Y., Smith, P., Darlington, C., & McNaughton, N. (2012). Septal elicitation of hippocampal theta rhythm did not repair cognitive and emotional deficits resulting from vestibular lesions. Hippocampus, 22(5), 1176-1187. [doi: 10.1002/hipo.20963](http://dx.doi.org/10.1002/hipo.20963)

Zheng, Y., Vagal, S., McNamara, E., Darlington, C. L., & Smith, P. F. (2012). A dose–response analysis of the effects of L-baclofen on chronic tinnitus caused by acoustic trauma in rats. Neuropharmacology, 62, 940-946. [doi: 10.1016/j.neuropharm.2011.09.027](http://dx.doi.org/10.1016/j.neuropharm.2011.09.027)

Zheng, Y., Hamilton, E., Begum, S., Smith, P. F., & Darlington, C. L. (2011). The effects of acoustic trauma that can cause tinnitus on spatial performance in rats. Neuroscience, 186, 48-56. [doi: 10.1016/j.neuroscience.2011.04.052](http://dx.doi.org/10.1016/j.neuroscience.2011.04.052)

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Zheng, Y., Begum, S., Zhang, C., Fleming, K., Masumura, C., Zhang, M., Smith, P., & Darlington, C. (2011). Increased BrdU incorporation reflecting DNA repair, neuronal de-differentiation or possible neurogenesis in the adult cochlear nucleus following bilateral cochlear lesions in the rat. Experimental Brain Research, 210(3-4), 477-487. [doi: 10.1007/s00221-010-2491-0](http://dx.doi.org/10.1007/s00221-010-2491-0)

Zheng, Y., Hamilton, E., Stiles, L., McNamara, E., de Waele, C., Smith, P. F., & Darlington, C. L. (2011). Acoustic trauma that can cause tinnitus impairs impulsive control but not performance accuracy in the 5-choice serial reaction time task in rats. Neuroscience, 180, 75-84. [doi: 10.1016/j.neuroscience.2011.02.040](http://dx.doi.org/10.1016/j.neuroscience.2011.02.040)

Zheng, Y., Masumura, C., Chung, P., Darlington, C. L., & Smith, P. F. (2010). Cell proliferation and survival in the vestibular nucleus following bilateral vestibular deafferentation in the adult rat. Neuroscience Letters, 468(1), 85-88. [doi: 10.1016/j.neulet.2009.10.070](http://dx.doi.org/10.1016/j.neulet.2009.10.070)

Zheng, Y., Vagal, S., Zhu, X.-X., de Waele, C., Smith, P. F., Wang, G., Zhang, M., & Darlington, C. L. (2010). The effects of the Chinese herbal medicine EMF01 on salicylate-induced tinnitus in rats. Journal of Ethnopharmacology, 128(2), 545-548. [doi: 10.1016/j.jep.2010.01.053](http://dx.doi.org/10.1016/j.jep.2010.01.053)

Zheng, Y., Stiles, L., Hamilton, E., Smith, P. F., & Darlington, C. L. (2010). The effects of the synthetic cannabinoid receptor agonists, WIN55,212-2 and CP55,940, on salicylate-induced tinnitus in rats. Hearing Research, 268(1-2), 145-150. [doi: 10.1016/j.heares.2010.05.015](http://dx.doi.org/10.1016/j.heares.2010.05.015)

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Zheng, Y., Balabhadrapatruni, S., Masumura, C., Munro, O., Darlington, C. L., & Smith, P. F. (2009). Bilateral vestibular deafferentation causes deficits in a 5-choice serial reaction time task in rats. Behavioural Brain Research, 203, 113-117. [doi: 10.1016/j.bbr.2009.04.027](http://dx.doi.org/10.1016/j.bbr.2009.04.027)

Zheng, Y., Goddard, M., Darlington, C. L., & Smith, P. F. (2009). Long-term deficits on a foraging task after bilateral vestibular deafferentation in rats. Hippocampus, 19(5), 480-486. [doi: 10.1002/hipo.20533](http://dx.doi.org/10.1002/hipo.20533)

Zheng, Y., Goddard, M., Darlington, C. L., & Smith, P. F. (2008). Effects of bilateral vestibular deafferentation on anxiety-related behaviours in Wistar rats. Behavioural Brain Research, 193(1), 55-62. [doi: 10.1016/j.bbr.2008.04.018](http://dx.doi.org/10.1016/j.bbr.2008.04.018)

Zheng, Y., Hooton, K., Smith, P. F., & Darlington, C. L. (2008). Carbamazepine reduces the behavioural manifestations of tinnitus following salicylate treatments in rats. Acta Oto-Laryngologica, 128(1), 48-52. [doi: 10.1080/00016480701361939](http://dx.doi.org/10.1080/00016480701361939)

Baek, J.-H., Zheng, Y., Darlington, C. L., & Smith, P. F. (2008). Cannabinoid CB2 receptor expression in the rat brainstem cochlear and vestibular nuclei. Acta Oto-Laryngologica, 128(9), 961-967. [doi: 10.1080/00016480701796944](http://dx.doi.org/10.1080/00016480701796944)

### **Journal - Research Other**

Smith, P. F., Geddes, L. H., Baek, J.-H., Darlington, C. L., & Zheng, Y. (2010). Modulation of memory by vestibular lesions and galvanic vestibular stimulation. Frontiers in Neurology, 1, 141. [doi: 10.3389/fneur.2010.00141](http://dx.doi.org/10.3389/fneur.2010.00141)

Smith, P. F., Darlington, C. L., & Zheng, Y. (2010). Move it or lose it: Is stimulation of the vestibular system necessary for normal spatial memory? Hippocampus, 20(1), 36-43. [doi: 10.1002/hipo.20588](http://dx.doi.org/10.1002/hipo.20588)