

## BIOGRAPHICAL SKETCH

NAME Ning Zhou		POSITION TITLE Assistant Professor, China Medical University, Taiwan	
EDUCATION/TRAINING			
INSTITUTION AND LOCATION	DEGREE	YEAR(s)	FIELD OF STUDY
Peking University	BSc	1998-2002	Physiology and Biophysics
University of British Columbia	PhD	2003-2010	Neuroscience

### Appointments

2013-present- Assistant Professor, China Medical University

2011-present – Investigator, China Medical University Hospital

2010-2011 – Postdoctoral Fellow, University of British Columbia

### Selected Publications

Shen ML, Wang CH, Chen RY, Zhou N\*, Kao ST\*, Wu DC\*. Luteolin inhibits GABA<sub>A</sub> receptors in HEK cells and brain slices. **Scientific Reports**. 2016 Jun 13; (6)27695.

Rosenegger DG, Tran CH, LeDue J, Zhou N, Gordon GR. A high performance, cost-effective, open-source microscope for scanning two-photon microscopy that is modular and readily adaptable. **PLoS One**. 2014 Oct 21;9(10):e110475. doi: 10.1371/journal.pone.0110475.

Zhou N, Wang CH, Zhang S, Wu DC. The GLRA1 Missense Mutation W170S Associates Lack of Zn<sup>2+</sup> Potentiation with Human Hyperekplexia. **The Journal of Neuroscience**. 2013, 33(45):17675-81.

Zhou N, Rungta RL, Malik A, Han H, Wu DC, Feighan D MacVicar B.A. (2013) Regenerative glutamate release by presynaptic NMDA receptors contributes to spreading depression. **Journal of Cerebral Blood Flow and Metabolism**, 33(10), 1582-94

Choi H.B., Gordon G.R.J., Zhou N., Tai C., Rungta RL, Martinez J, Milner TA, Ryu J.K., McLarnon J.G., Tresguerres M., Levin L.R., Buck J., MacVicar B.A. (2012). Metabolic communication between neurons and astrocytes via bicarbonate-responsive soluble adenylyl cyclase. **Neuron**, 75 (6).

Zhou N, Gordon GRJ, Feighan D, MacVicar BA (2010) Transient swelling, acidification and mitochondrial depolarization occurs in neurons but not astrocytes during spreading depression. **Cerebral Cortex**, 20 (11):2614-2624.

Thompson RJ, Zhou N, MacVicar BA (2006) Ischemia opens neuronal gap junction hemichannels. **Science** 312:924-927.

Brust TB, Cayabyab FS, Zhou N, MacVicar BA (2006) p38 mitogen-activated protein kinase contributes to adenosine A1 receptor-mediated synaptic depression in area CA1 of the rat hippocampus. **The Journal of Neuroscience**. 26: 12427-12438.

## Research Biography

Dr. Ning Zhou joined China Medical University as an investigator in 2011, and was appointed as an assistant professor in the Graduate Institute of Clinical Medical Science in 2013. Before taking this position she studied in the Graduate Program of Neuroscience at University of British Columbia and obtained the PhD degree in 2010. Dr. Zhou's major research interest focuses on spreading depolarization, which is a severe neurological condition following acute brain injuries and contributes to poor outcomes in patients. She try to understand the neurophysiological mechanisms by which spreading depolarization causes abnormal neural functions and how it induces brain damage. She is also interested in finding therapeutic strategies for preventing spreading depolarization-associated pathological responses of the brain. One of her research papers concerning the neuronal and astroglial mechanisms of spreading depolarization has been cited for over 60 times since 2010. Moreover, Dr. Zhou is expertise in construction and application of two-photon imaging systems for neuroscience studies. Her lab applies techniques including two-photon laser-scanning microscopy, patch-clamp recordings, *in vivo* electrophysiological recordings, molecular and biochemical approaches.