BIOGRAPHICAL SKETCH

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NAME	POSITION TITLE
Chu, Hong-Yuan	Research Associate Department of Physiology Northwestern University
eRA COMMONS USER NAME (credential, e.g., agency login) HONGYUANCHU	

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	MM/YY	FIELD OF STUDY
Ocean University of China	B.S.	09/01-06/05	Medicine
Shanghai Institute of Materia Medica, China	Ph.D.	09/05-06/10	Neuropharmacology
National Institutes of Health, U.S.A	Postdoctoral	08/10-10/12	Neuroscience
Northwestern University, U.S.A	Postdoctoral	11/12-now	Neurophysiology

A. Personal Statement

The long-term goal of my research is to understand brain dysfunction, especially at the level of neuronal circuits. During my Ph.D. study, I utilized *in vitro* and *in vivo* electrophysiology to study models of central nervous system diseases, such as drug addiction, schizophrenia, and Parkinson's disease. I also equipped myself with optogenetics during my first postdoctoral training and would like to apply this powerful technique and other state-of-the-art methods e.g. two-photon microscopy, to study dysfunction of neuronal circuits.

B. Positions and Honors

Positions and Employment

2010-2012 Visiting Fellow, National Institute of Mental Health, NIH

2012-present Research Associate, Physiology, Northwestern University

Other Experience and Professional Memberships

2012- Member, Society for Neuroscience

Honors and Awards

2012 Fellow Awards for Research Excellence, NIH

C. Selected Peer-reviewed Publications

1. Chu H, Jin G, Friedman E, Zhen X (2008) Recent development in studies of tetrahydroprotoberberines: mechanism in antinociception and drug addiction. Cell Mol Neurobiol. 28: 491-9. PMID: 17710533.

2. Chu HY, Gu Q, Jin GZ, Hu GY, Zhen X (2010) Electrophysiological effects of SKF83959 on hippocampal CA1 pyramidal neurons: potential mechanisms for the drug's neuroprotective effects. PLoS One 5(10). doi:pii: e13118. PMCID: PMC2948503

3. Chu HY, Yang Z, Zhao B, Jin GZ, Hu GY, Zhen X (2010) Activation of phosphatidylinositol-linked D1-like receptors increases spontaneous glutamate release in rat somatosensory cortical neurons *in vitro*. Brain Res 1343:20-7. PMID: 20420815

4. Chu HY, Zhen X (2010) Hyperpolarization-activated, cyclic nucleotide-gated (HCN) channels in the regulation of midbrain dopamine systems. Acta Pharmacol Sin 31: 1036-43. PMID: 20676119

5. Chu HY, Wu Q, Zhou S, Cao X, Zhang A, Jin GZ, Hu GY, Zhen X (2011) SKF83959 suppresses excitatory synaptic transmission in rat hippocampus via a dopamine receptor-independent mechanism. J Neurosci Res 89: 1259-66. PMID: 21538463

6. Gao M, Chu HY, Jin GZ, Zhang ZJ, Wu J, Zhen XC (2011) *l*-Stepholidine-induced excitation of dopamine neurons in rat ventral tegmental area is associated with its 5-HT(1A) receptor partial agonistic activity. Synapse 65: 379-87. PMID: 20803620

7. Chu HY, Ito W, Li J, Morozov A (2012) Target-specific suppression of GABA release from parvalbumin interneurons in the basolateral amygdala by dopamine. J Neurosci 32: 14815-20. PMCID: PMC3491568

D. Research Support

Active

1. 2R37NS041280 Bevan (PI) 04/01/2001-05/31/2016

NIH/NINDS

Synaptic Transmission, Plasticity and Integration in the Subthalamic Nucleus

The objectives are to determine the underlying mechanisms and impact of external globus pallidus-subthalamic nucleus synaptic proliferation following loss of dopamine.

Role: Investigator