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## Education

### **National Institutes of Health/the George Washington University**

Graduate Partnership Program

Bethesda, MD

“Role of Protein Synthesis and CREB in NT-3-mediated Long-term Synaptic Modulation”

Neuroscience and Genetics Ph.D., May 2005

Doctoral thesis advisor: Dr. Bai Lu

### **University of Michigan, Ann Arbor**

Rackham School of Graduate Studies

Ann Arbor, MI

Biology, M.S., May 1999

### **Korea Advanced Institute of Science and Technology**

Daejeon, Republic of Korea

Biological Sciences, B.S. *cum laude*, July 1997

## Research / Teaching Experience

**Postdoctoral fellow, Duke Neurobiology / Howard Hughes Medical Institute**, Nov. 2006-present. Synaptic plasticity triggered by selective suppression of NMDA-receptor activity in individual neurons. Advisor, Dr. Michael Dean Ehlers.

**Postdoctoral fellow, National Institutes of Health**, May 2005-Oct. 2006.

Activity dependent cleavage of pro-neurotrophin modulates synaptic competition in *Xenopus* neuromuscular junction. Advisor, Dr. Bai Lu.

**Ph.D. National Institute of Health/ the George Washington University**, 2005.

Cellular mechanisms involved in neurotrophin-3 mediated long-term synaptic modulation in *Xenopus* neuromuscular synapses. Advisor, Dr. Bai Lu.

**Teaching assistant**, Biological Sciences, University of Michigan, 1998-1999.

Undergraduate biochemistry courses and labs.

**Research assistant**, Biological Sciences, University of Michigan, 1998-1999.

Role of epidermal growth factor receptor (EGFR) and brain-derived neurotrophic factor (BDNF) in the development of anterior gustatory epithelia in the palate and tongue in mice.

Advisor, Dr. Bruce Oakley.

## Scholarships, Fellowships, Awards

### **Research fellowship from the Fundamental and Translational Neuroscience Training Program, 2007**

Department of Neurobiology, Duke University Medical Center  
Durham, NC

### **The Fellows Awards for Research Excellence, 2005**

National Institute of Health  
Bethesda, MD

### **NIH pre-IRTA fellowship, 2001-2005**

National Institute of Child Health and Development  
Bethesda, MD.

### **Institute for Biomedical Science Fellowship, 1999-2001**

The George Washington University  
Washington DC.

### **Student Merit Scholarship, 1993-1997**

Korea Advanced Institute of Science and Technology  
Daejeon, Republic of Korea

## Miscellaneous

Reviewer for following journals: *PLOS One*, *European Journal of Neuroscience*, *Neuropharmacology*, and *BBA general*.

## Publications

### Research Papers

**H.-S. Je** and B. Lu (2007) Chemically inducible inactivation of protein synthesis in genetically targeted neurons. Manuscript in preparation.

**H.-S. Je**, F. Yang, and B. Lu (2007) Activity-dependent cleavage of pro-neurotrophin regulates synaptic competition at the neuromuscular junction. Manuscript submitted.

Z. Lu, **H.-S. Je**, B. Lu, and G. Feng. (2007) Regulation of post-synaptic development by synapse-associated E3 ubiquitin ligase at the Neuromuscular Junction. *J. Cell Biology*. 177, (in press).

**H.-S. Je**, F. Yang, and B. Lu. (2006) Neurotrophin-3 induces structural and functional modifications of synapses through distinct molecular mechanisms. *J. Cell Biology*. 175, 1029-1042.

**H.-S. Je**, J.-Z. Zhou, F. Yang, and B. Lu. (2005) Distinct mechanisms for neurotrophin-3-induced acute and long-term synaptic potentiation. *J. Neurosci*. 25, 11719-11729.

Z. G. Luo, **H.-S. Je**, F. Yang, W. C. Xiong, B. Lu, and L. Mei (2003) Implication of Geranylgeranyltransferase I in Synapse Formation. *Neuron*. 40, 703-717.

J. Du, L. Feng, E. Zaitsev, **H. -S. Je**, X. Liu, and B. Lu (2003) Regulation of TrkB receptor tyrosine kinase and its internalization by neuronal activity and Ca<sup>2+</sup> influx, *J. Cell Biol.* 163, 385-395.

C. Wang, F. Yang, X. He, **H. -S. Je**, J. -Z. Zhou, K. Eckermann, D. Kawamura, L. Feng, L. Shen, and B. Lu. (2002) Regulation of neuromuscular synapse development by glial cell line-derived neurotrophic factor and neurturin. *J. Biol. Chem.* 277, 10614-10625.

#### Reviews and Book Chapters

N. H. Woo, **H. -S. Je**, and B. Lu (2006) Role of Neurotrophins in the formation and maintenance of synapses. *Molecular Mechanisms of Synaptogenesis*, Springer, New York, pp.179-194.

B. Lu, and **H. -S. Je** (2003) Neurotrophic regulation of the development and function of the neuromuscular synapses. *J. Neurocytol.* 32, 931-941.

S. A. Moody and **H. -S. Je** (2002) Neural induction, Neural fate stabilization, and Neural stem cells. *Reviews in Stem and Progenitor Cells. The Scientific World Journal*, 2, 1147-1166.

#### Abstracts

**H.-S. Je**, F. Yang, and B. Lu (2006) Activity-dependent cleavage of pro-neurotrophin regulates synaptic competition at the neuromuscular junction. Society for *Neuroscience*, Atlanta, GA.

**H.-S. Je**, J. Zhou, and B. Lu. (2004) NT3-induced Long-term Synaptic Modulation Requires Receptor Endocytosis and New Protein Synthesis *Cold Spring Harbor Laboratory Meeting: Axon Guidance*, Cold Spring Harbor, NY.

**H.-S. Je**, C. Kiang, and B. Lu (2003) Localization and immobilization of synaptic vesicle clusters during synaptogenesis. Society for *Neuroscience*, New Orleans, LA

**H.-S. Je**, J. Zhou, and B. Lu. (2002) Role of protein synthesis and CREB in NT-3 induced long-term synaptic modulation. Society for *Neuroscience*, Orlando, FL.