Curriculum Vitae

Bobae An

Personal Records

Name: Bobae An
Office address: Department of Neurobiology, Duke University
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Educations

Ph.D. (2009-2014)
Interdisciplinary Program of Neuroscience, Seoul National University, Seoul, Korea
- Thesis: Neural correlates of fear learning in the amygdala and the ventromedial prefrontal cortex
- Advisor: Dr. Sukwoo Choi

B.A. (2004-2009)
Department of Social Science, Ewha Womans University, Seoul, Korea
- Advisor: Dr. Junmo Chung

Research experiences

Ph.D. Candidate (Mar 2009-Aug 2014)
Seoul National University, Seoul, Korea
Project: Neural correlates of reversible fear learning in the lateral amygdala
- In vivo single unit recordings and data analysis using Matlab
- Behavioral experiences: fear conditioning, extinction and re-conditioning

Project: Neural correlates of extensive fear extinction
- Cannulation and microinfusion of drugs into the amygdala
- Immunohistochemistry and cell counting assay
- In vivo single unit recordings and data ananlysis using Matlab
- Behavioral experiences: fear conditioning, extinction and renewal

Postdoctoral Fellow (Aug 2014- Nov 2015)
Seoul National University, Seoul, Korea
Project: Involvement of mGluR2/3 in fear extinction
- Cannulation and microinfusion of drugs into the amygdala
- Behavioral experiences: fear conditioning, extinction and open field test

Project: Neural correlates of fear memory reactivation

- Local field potential recordings and data analysis using Matlab
- Behavioral experiences: fear conditioning and reactivation

Publications

Long-term neural correlates of reversible fear learning in the lateral amygdala
An B, Hong I, Choi S.
The Journal of Neuroscience (2012) 32:16845-16856.

mGluR2/3 in the lateral amygdala is required for fear extinction: cortical input synapses onto the lateral amygdala as a target site of the mGluR2/3 action
Kim J, **An B**, Kim J, Park S, Park S, Hong I, Lee S, Park K, Choi S.
Neuropsychopharmachology (2015) doi: NPP.2015.145.

GluA1 phosphorylation at Serine 831 in the lateral amygdala is required for fear renewal
Lee S, Song B, Kim J, Park K, Hong I, **An B**, Song S, Lee J, Park S, Kim J, Park D, Lee CJ, Kim K, Shin K, Tsien R, Choi S.
Nature Neuroscience (2013) 16:1436–1444.

Quantitative Proteomics of Auditory Fear conditioning
Hong I, Kang T, Yun K, Yoo Y, Park S, Kim J, **An B**, Song S, Lee S, Kim J, Song B, Kwon K, Kim J, Park Y, Choi S.
Biochemical and Biophysical Research Communications (2013) 434(1):87-94.

Reversible plasticity of fear memory-encoding amygdala synaptic circuits even after fear memory consolidation.
Hong I, Kim J, Lee J, Park S, Song B, Kim J, **An B**, Park K, Lee HW, Lee S, Kim H, Park SH, Eom KD, Lee S, Choi S.
PLoS One (2011) 6:e24260.

Modulation of fear memory by retrieval and extinction: A clue for memory deconsolidation
Hong I,Kim J, Song B, Park S, Lee J, Kim J, **An B**, Lee S, Choi S.
Reviews in the Neuroscience (2011) 22(2):205-29.

ABA renewal involves enhancements in both GluA2-lacking AMPA receptor activity and GluA1 phosphorylation in the lateral amygdala
Park K, Song B, Kim J, Hong I, Song S, Lee J, Park S, Kim J, **An B**, Lee H, Lee S, Kim H, Lee CJ, Lee S, Choi S.
Plos One (2014) 9(6):e100108.

Group I mGluR-dependent depotentiation in the lateral amygdala does not require the removal of calcium-permeable AMPA receptors
Park K, Song S, Hong I, Song B, Kim J, Park S, Lee J, Song S, **An B**, Kim J, Lee J, Shin K, Choi S, Lee S.
Frontiers in Behavioral Neuroscience (2014) 8:269

Patent

Pharmaceutical composition for preventing or treating mental diseases comprising GluR2-lacking AMPAR antagonists (PCT/KR2009/000669)

Pharmaceutical composition for treating anxiety disorder, containing N-acetyl-L-cysteine or derivative thereof (PCT/KR2010/006035)

Pharmaceutical Composition Comprising Inhibitors of Phosphorylation of GluA1 Subunit of AMPA receptor for preventing or treating mental disorders (10-2014-0108781/Patent Pending)

Honors and Awards

Brain Korea 21 Scholarships (2009-2012)
Brain Korea 21 Program for Leading Universities & Students (2013-2014)
Best Ph.D. Thesis Awards from College of Natural Sciences at Seoul National University (2014)

Abstracts/ Meeting Experiences

Bobae An, Ingie Hong, Jeongyeon Kim and Sukwoo Choi (2012) Lateral amygdala neurons encode various aspects of reversible fear learning. Program No. 291.28. *Society for Neuroscience in USA.*

Bobae An, Ingie Hong and Sukwoo Choi (2012) Neural correlates of conditioned fear memory in the amygdala. *The Korean brain society in Korea.*

Bobae An, Jihye Kim, Junghwa Lee, Jeongyeon Kim and Sukwoo Choi (2015) Lateral amygdala neurons encode various aspects of reversible fear learning. *Society for Neuroscience in USA.*