

CURRICULUM VITAE

Gukhan Kim

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Education & Professional Career

06/2010 ~ 11/2016 **Ph.D.** in Neuroscience
Oregon Health & Science University
02/2007 ~ 03/2009 **M.S.** in Medical Science
University of Ulsan, College of Medicine, Korea
03/2001 ~ 02/2007 **B.S.** in Life Science
Handong University, Korea

Position and Employment

03/2017 ~ present **Postdoctoral Fellow**, Cold Spring Harbor Laboratory
(PI: Josh Huang, Ph.D.)
11/2016 ~ 02/2017 **Postdoctoral Fellow**, Vollum Institute, Oregon Health & Science University
(PI: John Adelman, Ph.D.)
06/2010 ~ 11/2016 **Graduate Student**, Neuroscience, Oregon Health & Science University
(PI: John Adelman, Ph.D.)
06/2009 ~ 05/2010 **Project Intern**, Mol & Human Genetics, Baylor College of Medicine
(PI: Jae Lee, Ph.D.)
03/2007 ~ 11/2009 **Teaching Assistant**, Pharmacology, University of Ulsan, College of Medicine
(PI: Seung-Hwan Kim, Ph.D.)
06/2006 ~ 08/2006 **Summer Research Internship**, Korea Research Institute of Biosci. & Biotech., Korea
03/2006 ~ 12/2006 **Teaching Assistant**, Immunology, Handong University, Korea
02/2004 ~ 02/2006 **Military Service**, Republic of Korea
03/2003 ~ 12/2003 **Teaching Assistant**, General Physics I, Handong University, Korea

Award

2015 Tartar Fellowship (Oregon Health & Science University)

Research Experience

2011 ~ 2016 Vollum Institute, Oregon Health & Science University. (PI: John Adelman, Ph.D.)
Project: The role of MPP2 and SAP97 on synaptic function and localization of SK2-containing channels in hippocampal CA1 pyramidal neurons.
Techniques: Gene cloning and site-directed mutagenesis, bacterial protein purification and GST-pulldown assay, cell culture, synaptosome preparation from mouse brain, colP, Western blot, mouse brain perfusion and fixation for electron microscopy purpose, *in-utero* electroporation in rodent embryo, immunocytochemistry, acute hippocampal slice preparation from rodents, whole cell patch clamp recording.
2010 ~ 2011 Vollum Institute, Oregon Health & Science University
Rotation 1: Determination of the stoichiometry between endogenous PKA subtypes.
(PI: Haining Zhong, Ph.D.)
Techniques: DNA transfection in HEK293 cells, immunocytochemistry for staining with different PKA subtypes, 2-photon microscopy to measure the relative brightness between different fluorescent proteins tagged PKA subtypes.
Rotation 2: The role of Ezh2 on adipogenesis.
(PI: Soo Lee, Ph.D.)
Techniques: H&E staining to measure the size of adipocyte from adipocyte specific Ezh2 deleted mice.
Rotation 3: Molecular mechanism for coupled dynamics of SK2 and AMPA receptors.

(PI: John Adelman)

Techniques: Hippocampal slice culture and gene gun DNA delivery method.

2009 ~ 2010

Baylor College of Medicine (PI: Jae Lee. Ph.D.)

Project: The role of Ezh2 and ASCOM complex on adipogenesis.

Techniques: Conventional

Techniques: Conventional and quantitative RT-PCR, gene cloning and site-directed mutagenesis, chromosome-immunoprecipitation, luciferase assay to measure the promoter activity, embryonic stem cell culture and adipocyte differentiation *in-vitro*, insulin and glucose tolerance test in mouse.

2007 ~ 2009

University of Ulsan, College of Medicine (Seung-whan Kim Ph.D.)

Project: Transcriptional regulation of hepatic clusterin expression by SREBP-1c and its role in metabolism.

Techniques: Gene cloning, conventional and quantitative RT-PCR, luciferase assay, insulin and glucose tolerance test in mouse.

Publication

1. **Gukhan Kim**, Rafael Luján, Jochen Schwenk, Melissa H Kelley, Carolina Aguado, Masahiko Watanabe, Bernd Fakler, James Maylie, John P Adelman. Membrane palmitoylated protein 2 is a synaptic scaffold protein required for synaptic SK2-containing channel function. *Elife*. 2016 Feb 12;5. pii: e12637
2. Gyun-Sik Oh*, **Gukhan Kim***, Jin Yoon, Geun Hyang Kim, Seung-Whan Kim. The E-box like sterol regulatory element mediates the insulin-stimulated expression of hepatic clusterin. *Biochemical and Biophysical Research Communications*. 2015. (465) 501-506 (***first co-author**)
3. **Gukhan Kim**, Geun Hyang Kim, Gyun-Sik Oh, Jin Yoon, Hae Won Kim, Min-Seon Kim, Seung-Whan Kim. SREBP-1c regulates glucose-stimulated hepatic clusterin expression. *Biochemical and Biophysical Research Communications*. 2011. (408) 720-725
4. Geun Hyang Kim, Keunhee Park, Seon-Yong Yeom, Kyung Jin Lee, **Gukhan Kim**, Jesang Ko, Dong-Kwon Rhee, Young Hoon Kim, Hye Kyung Lee, Hye Won Kim, Goo Taeg Oh, Ki-Up Lee, Jae W. Lee, Seung-Whan Kim. Characterization of ASC-2 as an anti-atherogenic transcriptional coactivator of liver X receptors in macrophages. *Molecular Endocrinology*. 2009 (23) 966-974

Abstract

1. **Gukhan Kim**, Rafael Lujan, James Maylie, John Adelman. Synaptic localization of SK2-containing channels. EMBO/EMBL symposium: Seeing is Believing. 2015, Heidelberg, Germany.
2. **Gukhan Kim**, Melissa Kelley, Jim Maylie, John P. Adelman. Synaptic SK2 channels co-assembles with MPP2 and SAP97. Oregon Health and Science University, Neuroscience Graduate Program Retreat. 2012, Portland, OR, USA.
3. **Gukhan Kim**, Geung Hyang Kim, Kyung Jin.Lee, Hae Won.Kim, Min-Sun.Kim, Seung-Whan.Kim. The characteristics of clusterin as a metabolic regulation factor. The 60th The Korean Society of Pharmacology academic symposium. 2008, Pusan, Korea.