

Curriculum Vitae

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Hun Sik Kim, Ph.D.

Education and Training

- 1996-2001 **Ph.D.** in Biological Sciences
Korea Advanced Institute of Science and Technology, Daejeon, Korea
- 1994-1996 **M.S.** in Biological Sciences
Korea Advanced Institute of Science and Technology, Daejeon, Korea
- 1990-1994 **B.S.** in Biotechnology
Yonsei University, Seoul, Korea

Professional Experiences

- 2017-present **Associate Professor**
Department of Biomedical Sciences, University of Ulsan College of
Medicine, Seoul, Korea
- 2011-2017 **Assistant Professor**
Department of Biomedical Sciences, University of Ulsan College of
Medicine, Seoul, Korea
- 2007-2010 **Research Fellow**
National Institute of Allergy and Infectious Diseases (NIAID), USA
- 2003-2007 **Research Assistant Professor**
Department of Medicine, Sungkyunkwan University School of
Medicine, Seoul, Korea

Publications

(*Corresponding author)

(International)

1. Nayoung Kim, Ji-Wan Choi, Hye-Ran Park, Inki Kim, **Hun Sik Kim*** (2017) Amphotericin B, an Anti-Fungal Medication, Directly Increases the Cytotoxicity of NK Cells. *Int.J. Mol. Sci.* 2017 Jun 13;18(6) pii: E1262.
2. Hyung-Joon Kwon, Nayoung Kim*, **Hun Sik Kim*** (2017) Molecular checkpoints controlling natural killer cell activation and their therapeutic modulation for cancer immunotherapy. *Exp Mol Med.* 2017 Mar 31;49(3):e311.
3. Ji Heui Kim, Chang-Hoong Gong, Go Eun Choi, Sun A. Kim, **Hun Sik Kim**, Yong Ju Jang*

- (2016) Natural Killer Cell Deficits Aggravate Allergic Rhinosinusitis in a Murine Model. **ORL J Otorhinolaryngol Relat Spec.** 2016 Jul 7;78(4):199-207.
4. Sung Bu Lee, Jeong-Ah Song, Go-Eun Choi, [Hun Sik Kim](#), Yong Ju Jang* (2016) Rhinovirus infection in murine chronic allergic rhinosinusitis model. **Int. Forum Allergy Rhinol.** 2016 Nov;6(11):1131-1138.
 5. Hyung-Joon Kwon , Go-Eun Choi, Sangryeol Ryu, Soon Jae Kwon, Sun Chang Kim, Claire Booth, Kim E. Nichols, [Hun Sik Kim*](#) (2016) Stepwise phosphorylation of p65 promotes NF- κ B activation and NK cell responses during target cell recognition. **Nature Communications** 2016 May 25;7:11686 DOI: 10.1038/ncomms11686.
 6. Ji Heui Kim, Go Eun Choi, Bong-Jae Lee, Seog Woon Kwon, Seung-Hyo Lee, [Hun Sik Kim*](#), Yong Ju Jang* (2016) Natural killer cells regulate eosinophilic inflammation in chronic rhinosinusitis. **Sci. Rep.** 2016 Jun 8;6:27615. doi: 10.1038/srep27615.
 7. [Hun Sik Kim*](#) (2015) A multifaceted approach targeting NK cells for better treatment of cancer: focus on hematological malignancies. **Blood Res.** 2015 Dec;50(4):189-91.
 8. [Hun Sik Kim*](#), Dong Chan Kim, Hong-Mi Kim, Hyung-Joon Kwon, Soon Jae Kwon, Suk-Jo Kang, Sun Chang Kim, Go-Eun Choi (2015) STAT1 deficiency redirects IFN signaling toward suppression of TLR response through a feedback activation of STAT3. **Sci. Rep.** 2015 Aug 24;5:13414 DOI: 10.1038/srep13414.
 9. Hyung-Joon Kwon , Soon Jae Kwon, Heejae Lee, Hye-Ran Park, Go-Eun Choi, Sang-Wook Kang, Seog Woon Kwon, Nacksung Kim, Soo Young Lee, Sangryeol Ryu, Sun Chang Kim, [Hun Sik Kim*](#) (2015) NK cell function triggered by multiple activating receptors is negatively regulated by glycogen synthase kinase-3 β . **Cell. Signal.** 2015 Sep;27(9):1731-41.
 10. Mi-Hyang Cho, Kwangmin Cho, Hoe-Jin Kang, Eun-Young Jeon, [Hun-Sik Kim](#), Hyung-Joon Kwon, Hong-Mi Kim, Dong-Hou Kim, Seung-Yong Yoon (2014) Autophagy in microglia degrades extracellular β -amyloid fibrils and regulates NALP3 inflammasome activation. **Autophagy**, 2014 Oct 1;10(10):1761-75.
 11. [Hun Sik Kim*](#), Hyung-Joon Kwon, Gye Eun Kim, Mi-Hyang Cho, Seung-Yong Yoon, Alexander J. Davies, Seog Bae Oh, Heuiran Lee, Young Keol Cho, Chul Hyun Joo, Seog Woon Kwon, Sun Chang Kim and Yoo Kyum Kim (2014) Attenuation of natural killer cell functions by capsaicin through a direct and TRPV1-independent mechanism. **Carcinogenesis**, 2014 Jul;35(7):1652-60.
 12. Ji Heui Kim, Gye Eun Kim, Gye Song Cho, Hyung-Joon Kwon, Chul Hyun Joo, [Hun Sik Kim*](#), Yong Ju Jang* (2013) Natural killer cells from patients with chronic rhinosinusitis have impaired effector functions. **PLoS One.** 2013 Oct 18;8(10):e77177.
 13. Jae Hyeon Kim, Sang-Man Jin, [Hun Sik Kim](#), Kyoung-Ah Kim, Myung-Shik Lee (2013) Immunotherapeutic treatment of autoimmune diabetes. **Crit. Rev. Immunol.** 2013;33(3):245-81.
 14. Eric O. Long*, [Hun Sik Kim*](#), Dongfang Liu*, Mary E. Peterson*, and Sumati Rajagopalan* (2013) Controlling NK Cell Responses: Integration of Signals for Activation and Inhibition.

- [Annu. Rev. Immunol.](#) 2013 Mar 21;31:227-58.
15. Gye Song Cho, Byung-Jae Moon, Bong-Jae Lee, Chang-Hoon Gong, Nam Hee Kim, You-Sun Kim, [Hun Sik Kim*](#), Yong Ju Jang* (2013) High Rates of Detection of Respiratory Viruses in the Nasal Washes and Mucosae of the Patients with Chronic Rhinosinusitis. **J. Clin. Microbiol.** 2013 Mar;51(3):979-84.
 16. [Hun Sik Kim*](#) and Eric O. Long* (2012) Complementary Phosphorylation Sites in the Adaptor Protein SLP-76 Promote Synergistic Activation of Natural Killer Cells. **Science Signaling** Jul 10;5(232):ra49.
 17. Myung-Shik Lee, Kyoung-Ah Kim and [Hun Sik Kim*](#) (2012) Role of pancreatic β -cell death and cell death-associated inflammation in diabetes. **Curr. Mol. Med.** 2012 Dec;12(10):1297-310.
 18. [Hun Sik Kim*](#), Jin Mo Park and Myung-Shik Lee* (2012) A defect in cell death of macrophages is a conserved feature of nonobese diabetic mouse. **Biochem. Biophys. Res. Commun.** Apr 27;421(1):145-51.
 19. Myung-Shik Lee, Hyung-Joon Kwon and [Hun Sik Kim*](#) (2012) Macrophages from Nonobese Diabetic Mouse Have a Selective Defect in IFN- γ but Not IFN- α/β Receptor Pathway. **J. Clin. Immunol.** Aug;32(4):753-61.
 20. Michael J. Ombrello, Elaine F. Remmers, Guangping Sun, Alexandra F. Freeman, Shrimati Datta, Parizad Torabi-Parizi, Naeha Subramanian, Tom D. Bunney, Rhona W. Baxendale, Marta S. Martins, Neil Romberg, Hirsh Komarow, Ivona Aksentijevich, [Hun Sik Kim](#), Jason Ho, Glenn Cruse, Mi-Yeon Jung, Alasdair M. Gilfillan, Dean D. Metcalfe, Celeste Nelson, Michelle O'Brien, Laura Wisch, Kelly Stone, Daniel C. Douek, Chhavi Gandhi, Alan A. Wanderer, Hane Lee, Stanley F. Nelson, Kevin V. Shianna, Elizabeth T. Cirulli, David B. Goldstein, Eric O. Long, Susan Moir, Eric Meffre, Steven M. Holland, Daniel L. Kastner, Matilda Katan, Hal M. Hoffman and Joshua D. Milner (2012) Cold Urticaria, Immunodeficiency, and Autoimmunity Related to *PLCG2* Deletions. **N. Engl. J. Med.** Jan 26;366(4):330-8.
 21. Myung-Shik Lee, Do-Hoon Kim, June-Chul Lee, Sunshin Kim and [Hun Sik Kim*](#) (2011) Role of TLR2 in the pathogenesis of autoimmune diabetes and its therapeutic implication. **Diabetes Metab. Res. Rev.** 27, 797-801.
 22. [Hun Sik Kim](#), Asmita Das, Catharina C. Gross, Yanan T. Bryceson and Eric O. Long (2010) Synergistic Signals for Natural Cytotoxicity Are Required to Overcome Inhibition by c-Cbl Ubiquitin Ligase. **Immunity** 32, 175-186.
 23. [Hun Sik Kim](#) and Myung-Shik Lee (2009) Role of innate immunity in triggering and tuning of autoimmune diabetes. **Curr. Mol. Med.** 9, 30-44.
 24. [Hun Sik Kim](#), Myoung Sook Han, Kun Wook Chung, Sunshin Kim, Eunshil Kim, Myoung Joo Kim, Eunbyeong Jang, Hyun Ah Lee, Jeehee Youn, Shizuo Akira and Myung-Shik Lee (2007) Toll-like Receptor 2 Senses β -Cell Death and Contributes to the Initiation of Autoimmune Diabetes. **Immunity** 27, 321-333. (*Selected for 'Cover Paper'; for 'Previews', *Immunity* 27, 183-185; as 'Must-read', Faculty of F1000 Biology).

25. Sunshin Kim, Hun Sik Kim, Kun Wook Chung, Seung Hoon Oh, Jong Won Yun, Sin-Hyeog Im, Moon-Kyu Lee, Kwang-Won Kim and Myung-Shik Lee (2007) Essential role for STAT1 in pancreatic β -cell death and autoimmune type 1 diabetes of NOD mice. ***Diabetes*** 56, 2561-2568.
26. Sunshin Kim, Isabelle Millet, Hun Sik Kim, Ja Young Kim, Myoung Sook Han, Moon-Kyu Lee, Kwang-Won Kim, Robert S. Sherwin, Michael Karin and Myung-Shik Lee (2007) NF- κ B prevents β -cell death and autoimmune diabetes in NOD mice. ***Proc. Natl. Acad. Sci. USA*** 104, 1913-1918.
27. Hun Sik Kim and Myung-Shik Lee (2007) STAT1 signaling as a key modulator of cell death. ***Cell. Signal.*** 19, 454-465. (Review).
28. Hun Sik Kim, Sunshin Kim and Myung-Shik Lee (2005) IFN- γ sensitizes MIN6N8 insulinoma cells to TNF- α -induced apoptosis by inhibiting NF- κ B-mediated XIAP upregulation. ***Biochem. Biophys. Res. Commun.*** 336, 847-853.
29. Hun Sik Kim and Myung-Shik Lee (2005) Essential Role of STAT1 in caspase-independent cell death of activated macrophages through p38 mitogen-activated protein kinase/STAT1/reactive oxygen species pathway. ***Mol. Cell. Biol.*** 25, 6821-6833.
30. Hun Sik Kim, Inik Chang, Ja Young Kim, Kyung-Hee Choi and Myung-Shik Lee (2005) Caspase-mediated p65 cleavage promotes TRAIL-induced apoptosis. ***Cancer Res.*** 65, 6111-6119.
31. Inik Chang, Sunshin Kim, Ja Young Kim, Namjoo Cho, Yun-Hee Kim, Hun Sik Kim, Moon-Kyu Lee, Kwang-Won Kim and Myoung-Shik Lee (2003) The protective role of NF- κ B in pancreatic islet cell death by TNF- α . ***Diabetes*** 52, 1169-1175.
32. Hun Sik Kim, Ju Hyun Cho, Hyoung Woo Park, Ho Yoon, Mi Sun Kim and Sun Chang Kim (2002) Endotoxin-neutralizing antimicrobial proteins of the human placenta. ***J. Immunol.*** 168, 2356-2364.
33. Ju Hyun Cho, In Yup Park, Hun Sik Kim, Won Taek Lee, Mi Sun Kim and Sun Chang Kim (2002) Cathepsin D produces antimicrobial peptide parasin I from histone H2A in the skin mucosa of fish. ***FASEB J.*** 16, 429-431.
34. Hun Sik Kim, Ho Yoon, Il Minn, Chan Bae Park, Won Taek Lee, Michael Zasloff and Sun Chang Kim (2000) Pepsin-mediated processing of the cytoplasmic histone H2A to strong antimicrobial peptide buforin I. ***J. Immunol.*** 165, 3268-3274.
35. Chan Bae Park, Hun Sik Kim and Sun Chang Kim (1998) Mechanism of action of the antimicrobial peptide buforin II: buforin II kills microorganisms by penetrating the cell membrane and inhibiting cellular functions. ***Biochem. Biophys. Res. Commun.*** 244, 253-257.
36. Il Minn, Hun Sik Kim and Sun Chang Kim (1998) Antimicrobial peptides derived from pepsinogens in the stomach of the bullfrog, *Rana catesbeiana*. ***Biochim. Biophys. Acta-Molecular Basis of Disease*** 1407, 31-39.
37. Hun Sik Kim, Chan Bae Park, Mi Sun Kim and Sun Chang Kim (1996) cDNA cloning and

characterization of buforin I, an antimicrobial peptide: a cleavage product of histone H2A. **Biochem. Biophys. Res. Commun.** 229, 381-387.

(Domestic)

1. Hun Sik Kim* (2013) 자연살해세포와 항암면역치료. **Hanyang Medical Reviews** 33, 59-64.
2. Hyung-Joon Kwon and Hun Sik Kim* (2012) Signaling for synergistic activation of natural killer cells. **Immune Network** 2012 Dec;12(6):240-6.
3. Hun Sik Kim and Myung-Shik Lee (2006) Macrophage 사멸의 신호전달 경로. **Trends in Medical Research** 13, 25-34 (Review).
4. Hun Sik Kim and Sun Chang Kim (1999) Innate defense system of a stomach mediated by a histone H2A-derived antimicrobial peptide. **Proc. Mol. Biol. Genet.** 14, 429-430.
5. Hun Sik Kim, Il Minn, Chan Bae Park and Sun Chang Kim (1998) A study on regulation of gene expression and action-mechanism of an antimicrobial peptide, buforin. **Proc. Mol. Biol. Genet.** 13, 605-607.
6. Hun Sik Kim and Sun Chang Kim (1997) A study on regulation of gene expression and action-mechanism of an antimicrobial peptide, buforin. **Proc. Mol. Biol. Genet.** 12, 305-306.
7. Hun Sik Kim, Chan Bae Park, Mi Sun Kim and Sun Chang Kim (1996) cDNA cloning and characterization of an antimicrobial peptide, buforin I: a cleavage product of histone H2A. **Proc. Mol. Biol. Genet.** 11, 199-201.

(Others)

2017-present	Review Editor Frontiers in Immunology: NK and Innate Lymphoid Cell Biology
2017	학술위원회, 위원 The Korean Association of Immunologists
2016-2017	면역세포치료 재생의료연구회, 총무 The Korean Association of Immunologists
2012	Editorial Committee The 12 th International Symposium on Dendritic Cells
2011-2012	Information Committee Chair The Korean Association of Immunologists
2009-2010	Associate Faculty Member F1000 Biology