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- **Current Position:** Professor,
Department of Pharmacology, Yonsei University College of medicine
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- **Educational Background:**
 - 2001 MD College of Medicine, Yonsei University
 - 2003 MS College of Medicine, Yonsei University
 - 2006 PhD Nano-science and technology, Yonsei University
 - 2007-2010 Postdoctoral Fellow; Emory/Tufts University
 - 2010-2011 Assistant Professor; CHA University
 - 2011-2015 Assistant Professor, Associate Professor; Hanyang University
 - 2015-present Assistant Professor, Associate Professor, Professor
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- **Main Scientific Publications:**
 1. Song MJ, Kim HK, Lee ST, Kim YG, Seo SY, Park JM, Choi JW, Jang HW, Shin JH, Min SW, Zhejiu Quan, Kim JH, Kang HC, Yoon S, **Kim H⁺**. (Corresponding author). Sequence-specific prediction of the efficiencies of adenine and cytosine base editors.
Nat. Biotechnol. 2020 ; In press.
 2. Kim N, Kim HK, Lee ST, Seo JH, Choi JW, Park J, Min SW, Yoon S, Cho SR, **Kim H⁺**. (Corresponding author). Prediction of the sequence-specific cleavage activity of Cas9 variants.
Nat. Biotechnol. 2020; doi : 10.1038/s41587-020-0537-9
 3. Kim HK, Lee S, Kim Y, Park J, Min S, Choi JW, Huang TP, Yoon S, Liu DR, **Kim H⁺** (+Corresponding author). High-throughput analysis of the activities of xCas9, SpCas9-NG and SpCas9 at matched and mismatched target sequences in human cells.
Nat Biomed Eng. 2020 ;4(1):111-124., DOI: 10.1038 /s41551-019-0505-1
 4. Kim HK, Kim Y, Lee S, Min S, Bae JY, Choi JW, Park J, Jung D, Yoon S, **Kim H⁺** (+Corresponding author). SpCas9 activity prediction by DeepSpCas9, a deep learning – based model with high generalization performance.
Sci. Adv. 2019; 5 (11): eaax9249, DOI: 10.1126/sciadv.aax9249
 5. Kim HK, Min S, Song M, Jung S, Choi JW, Kim Y, Lee S, Yoon S⁺, **Kim H⁺** (+Corresponding authors). Deep learning improves prediction of CRISPR–Cpf1 guide RNA activity.
Nat. Biotechnol. 2018; 36(3):239-241.

6. Kim W, Lee S, Kim HS, Song M, Cha YH, Kim YH, Shin J, Lee ES, Joo Y, Song JJ, Choi EJ, Choi JW, Lee J, Kang M, Yook JI, Lee MG, Kim YS, Paik S, **Kim H**⁺ (+Corresponding author). Targeting mutant KRAS with CRISPR-Cas9 controls tumor growth. *Genome Res.* 2018; 28: 374-382.
7. Gopalappa R, Suresh B, Ramakrishna S⁺, **Kim H**⁺ (+Corresponding authors). Paired D10A Cas9 nickases are sometimes more efficient than individual nucleases for gene disruption. *Nucleic Acids Res.* 2018; 46(12):e71.
8. Lim JS, Gopalappa R, Kim SH, Ramakrishna S, Lee M, Kim W, Kim J, Park SM, Lee J, Oh JH, Kim HD, Park CH, Lee JS, Kim S, Kim SD, Han JM, Kang HC⁺, **Kim H**⁺, Lee JH⁺ (+Corresponding authors). Somatic Mutations in TSC1 and TSC2 cause focal cortical dysplasia. *Am. J. Hum. Genet.* 2017;100(3) :454-472.
9. Kim HK, Song M, Lee J, Menon AV, Jung S, Kang YM, Choi JW, Woo E, Koh HC, Nam JW, **Kim H**⁺ (+Corresponding author). In vivo high-throughput profiling of CRISPR-Cpf1 activity. *Nat. Methods.* 2017; 14(2):153-159.
10. Kim YH, Kim HO, Baek EJ, Kurita R, Cha HJ, Nakamura Y, **Kim H**⁺ (+Corresponding author). Rh D blood group conversion using transcription activator-like effector nucleases. *Nat. Commun.*, 2015; 6:7451.
11. Ramakrishna S, Dad A-B D, Beloor J, Gopalappa R, Lee S-K, **Kim H**⁺ (+Corresponding author). Gene disruption by cell-penetrating peptide-mediated delivery of Cas9 protein and guide RNA. *Genome Res.*, 2014; 24(6):1020-7. (Featured on the cover).
12. **Kim H**, Kim JS. A guide to genome engineering with programmable nucleases. *Nat. Rev. Genet.*, 2014; 15 (5): 321-334.
13. Ramakrishna S, Cho SW, Kim S, Song M, Gopalappa R, Kim JS⁺, **Kim H**⁺ (+Corresponding authors). Surrogate reporter-based enrichment of cells containing RNA-guided Cas9 nuclease-induced mutations. *Nat. Commun.*, 2014; 5: 3378.
14. Kim H, Um E, Cho SR, Jung C, **Kim H**⁺, and Kim JS⁺ (+Corresponding authors). Surrogate reporters for enrichment of cells with nuclease-induced mutations. *Nat. Methods*, 2011; 8: 941-3.