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EDUCATION

- 2005-2010 **CALIFORNIA INSTITUTE OF TECHNOLOGY**
Division of Engineering and Applied Science
Ph.D. in Bioengineering
- 2001-2005 **UNIVERSITY OF MINNESOTA**
Bachelor of Science in Biomedical Engineering
Graduation with *Summa Cum Laude* and High Distinction

PROFESSIONAL EXPERINECES

- 2014.09-present **SEOUL NATIONAL UNIVERSITY**
Department of Biological Sciences
Assistant, Associate Professor
- 2018.03-present **INSTITUTE FOR BASIC SCIENCE**
Center for RNA research
Team Leader (RNA therapeutics)
- 2010.11-2014.08 **GWANGJU INSTITUTE OF SCIENCE AND TECHNOLOGY**
Cell Dynamics Research Center, School of Life Sciences
Research Professor (in lieu of military service)
- 2010.05-2010.10 **CALIFORNIA INSTITUTE OF TECHNOLOGY**
Division of Chemistry and Chemical Engineering
Postdoctoral Scholar

RESEARCH INTERESTS

The pathogenesis of connective tissue diseases, RNA therapies, and synthetic biology

SELECTED PUBLICATIONS

Roh K*, Noh J*, Kim Y, Jang Y, J Kim, Choi H, Lee Y, Ji M, Kang D, Kim MS, Paik MJ, Chung J, **Kim JH**[#] and Kang C[#]
Lysosomal control of senescence and inflammation through cholesterol partitioning
Nature Metabolism, **2023**

Kang D*, Lee J*, Jung J, Carlson BA, Chang MJ, Chang CB, Kang SB, Lee BC, Gladyshev VN, Hatfield DL, Lee BJ[#], and **Kim JH**[#]
Selenophosphate synthetase 1 deficiency exacerbates osteoarthritis by dysregulating redox homeostasis
Nature Communications, **2022**

Cho Y*, Kim HS*, Kang D, Kim H, Lee N, Yun J, Kim YJ, Lee KM, Kim J, Kim HR, Hwang YI, Jo CH, and **Kim JH**[#].
CTRP3 exacerbates tendinopathy by dysregulating tendon stem cell differentiation and altering extracellular matrix composition.
Science Advances, **2021**

Kim H*, Cho Y*, Kim HS, Cheon D, Kim YJ, Chang MJ, Lee KM, Chang CB, Kang SB, Kang HG and **Kim JH**[#]
A system-level approach identifies HIF-2 α as a critical regulator of chondrosarcoma progression.
Nature Communications, **2020**

Kim S*, Han S*, Kim Y, Kim HS, Gu YR, Kang D, Cho Y, Kim H, Lee J, Seo Y, Chang MJ, Chang CB, Kang SB, and **Kim JH**[#]
Tankyrase inhibition preserves osteoarthritic cartilage by coordinating cartilage matrix anabolism via effects on SOX9 PARylation.
Nature Communications, **2019**

Kang D*, Shin J*, Cho Y, Kim HS, Gu YR, Kim H, You KT, Chang MJ, Chang CB, Kang SB, Kim JS, Kim VN, and

Kim JH[#] Stress-activated miR-204 governs senescent phenotypes of chondrocytes to promote osteoarthritis development.
Science Translational Medicine, **2019**

Won Y, Shin Y, CH Chun, Cho Y, Ha C, **Kim JH[#]**, and Chun JS[#] Pleiotropic roles of metallothioneins as regulators of chondrocyte apoptosis and catabolic and anabolic pathways during osteoarthritis pathogenesis
Annals of the Rheumatic Diseases, **2016**

Lee M, Won Y, Shin Y, **Kim JH[#]**, and Chun JS[#] Reciprocal activation of hypoxia-inducible factor (HIF)-2 α and the zinc-ZIP8-MTF1 axis amplifies catabolic signaling in osteoarthritis.
Osteoarthritis and Cartilage, **2015**

REVIEW PAPERS

Cho Y*, Jeong S*, Kim H, Kang D, Lee J, Kang SB[#], and **Kim JH[#]** Disease-modifying therapeutic strategies in osteoarthritis: current status and future directions.
Experimental & Molecular Medicine, **2021**

Kang D*, Lee J*, Wu C, Guo X, Lee BJ, Chun JS, and **Kim JH[#]** The role of selenium metabolism and selenoproteins in cartilage homeostasis and arthropathies.
Experimental & Molecular Medicine, **2020**

Kim H, Kang D, Cho Y, and **Kim JH[#]** Epigenetic regulation of chondrocyte catabolism and anabolism in osteoarthritis.
Molecules and Cells, **2015**