

Seungwoo Han

Curriculum Vitae



Assistant Professor
Department of Rheumatology, Kyungpook National University, Korea

Educational Background & Professional Experience

2018–Present	Assistant professor, Department of Rheumatology, Kyungpook National University Hospital
2014–2015	Research Fellow, Leon Nesti Lab, National Institutes of Health (NIH, NIAMS)
2008–2018	Head, Division of Rheumatology, Daegu Fatima Hospital, Daegu, South Korea
2004–2011	Ph.D.: Kyungpook National University School of Medicine
1993–1999	M.D.: Kyungpook National University School of Medicine

Research Interests

Dr. Han’s research focuses on understanding the molecular mechanisms underlying the catabolic processes in chondrocytes, particularly those associated with the degradation of the extracellular matrix in cartilage. Additionally, Dr. Han explores the integration of bioinformatics in these areas and the potential of gene therapy using lipid nanoparticle (LNP) technology to address treatment challenges in cartilage-related diseases.

Publications

- Han J, Kim YH, Han S. Increased oxidative phosphorylation through pyruvate dehydrogenase kinase 2 deficiency ameliorates cartilage degradation in mice with surgically induced osteoarthritis. *Experimental & Molecular Medicine*. 2025;57:390–401.
- Kim YJ, Han J, Han S. The interplay between endoplasmic reticulum stress and oxidative stress in chondrocyte catabolism. *Cartilage*. 2024:19476035241245803.
- Han S. Osteoarthritis year in review 2022: biology. *Osteoarthritis and Cartilage*. 2022;30(12):1575–1582.
- Han J, Cho HJ, Park D, Han S. DICAM in the extracellular vesicles from astrocytes attenuates microglia activation and neuroinflammation. *Cells*. 2022;11(19).
- Han J, Park D, Park JY, Han S. Inhibition of NADPH oxidases prevents the development of osteoarthritis. *Antioxidants (Basel)*. 2022;11(12).

