

Seung Hyun Han

Curriculum Vitae



Professor
Department of Oral Microbiology and Immunology, School of Dentistry, Seoul National University, Korea

● Educational Background & Professional Experience

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| 2006.03–Present | Assistant/Associate/Full Professor, Department of Oral Microbiology and Immunology, School of Dentistry, Seoul National University |
| 2004.03–2006.02 | Principal Investigator, Clinical Immunology Section, International Vaccine Institute (IVI) |
| 2002.03–2004.02 | Visiting Research Scientist, University of Alabama at Birmingham |
| 1999.03–2002.02 | Post-doctoral fellow, Laboratory of Immunology, Korea Research Institute of Bioscience and Biotechnology (KRIBB) |
| 1996.05–1997.05 | Visiting Researcher, Michigan State University |
| 1995.03–1999.02 | Ph.D., Korea Advanced Institute of Science and Technology (KAIST) |
| 1993.03–1995.02 | M.S., Korea Advanced Institute of Science and Technology (KAIST) |
| 1989.03–1993.02 | B.S., Korea Advanced Institute of Science and Technology (KAIST) |

● Research Interests

- Research field: bacterial pathogenesis, host immunity, and vaccines.
- (i) Molecular mechanisms of host–pathogen interaction,
 - (ii) Control of biofilm formation,
 - (iii) Mechanisms of inflammatory bone diseases and regulation of bone metabolism,
 - (iv) Development of vaccines and platform technology for the evaluation of vaccine

● Publications

1. Jiseon Kim, Ok–Jin Park, Chaeyeon Park, Yeongkag Kwon, Cheol–Heui Yun, Seung Hyun Han. Oral delivery of NOD2–activating Lactobacillus peptidoglycans prevents postmenopausal osteoporosis via gut microbiota modulation. Biomedicine & Pharmacotherapy, 2026.
2. Yeonjin Lim, Ok–Jin Park, Chaeyeon Park, Bo–Min Kim, Cheol–Heui Yun, Seung Hyun Han. Oral intake of heat–killed Lactiplantibacillus plantarum alleviates bone loss in an ovariectomized mouse model similarly to live L. plantarum. Journal of Microbiology and Biotechnology, 2026.
3. Ok–Jin Park, Jiseon Kim, Yeonjin Lim, Chaeyeon Park, Cheol–Heui Yun, Seung Hyun Han. The dual roles of peptidoglycans: NOD1 and NOD2 inversely regulate bone metabolism. Experimental and Molecular Medicine, 2025.
4. Ok–Jin Park, Yeongkag Kwon, Jiseon Kim, Chaeyeon Park, Cheol–Heui Yun, Seung Hyun Han. Muramyl dipeptide alleviates estrogen deficiency–induced osteoporosis through canonical Wnt signaling. Journal of Pathology, 2023.
5. Yeongkag Kwon, Ok–Jin Park, Jiseon Kim, Jae–Ho Cho, Cheol–Heui Yun, Seung Hyun Han. Cyclic dinucleotides inhibit osteoclast differentiation through STING–mediated interferon– β signaling. Journal of Bone and Mineral Research, 2019.