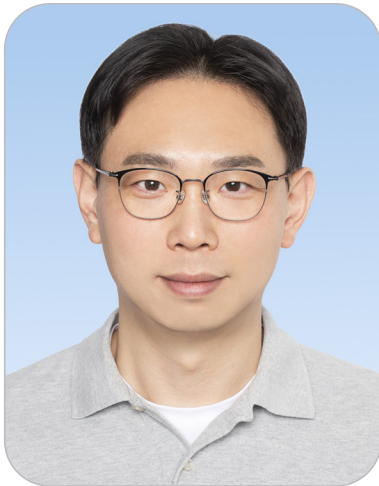


Hyeonwoo Kim

Curriculum Vitae



Assistant Professor
Department of Biological Sciences, KAIST Stem Cell Center, Korea Advanced Institute of Science and Technology (KAIST), Korea

Educational Background & Professional Experience

- 2022.03–Present (2026–Present) Assistant professor (Kwon Oh-hyun assistant professor), Department of Biological Sciences and KAIST Stem Cell Center, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, South Korea
- 2022.07–2022.08 Visiting assistant professor, Department of Developmental Biology, Harvard School of Dental Medicine, Boston, Massachusetts, USA
- 2016.08–2022.08 Postdoctoral fellow, Department of Cancer Biology/Cell Biology, Dana–Farber Cancer Institute/Harvard Medical School, Boston, Massachusetts, USA (Advisor: Dr. Bruce Spiegelman)
- 2013.05–2016.07 Postdoctoral fellow, Department of Molecular Genetics, The University of Texas Southwestern Medical Center, Dallas, Texas, USA (Advisor: Dr. Jin Ye)
- 2008.08–2013.05 Ph.D. student, Department of Molecular Genetics, The University of Texas Southwestern Medical Center, Dallas, Texas, USA
Thesis: “Identification of cellular sensors for unsaturated fatty acids” (Advisor: Dr. Jin Ye)
- 2002.03–2007.08 M.S. student, Department of Chemistry, Seoul National University, Seoul, Korea
Thesis: “Crystallization and preliminary X-ray crystallographic analysis of tRNA (m1G37) methyltransferase from Haemophilus Influenzae” (Advisor: Dr. Se Won Suh)
- 1998.03–2002.02 B.S. student, Department of Chemistry, Seoul National University, Seoul, Korea

Research Interests

His laboratory studies skeletal muscle and bone adaptation to exercise and microgravity using proteomics, biochemistry, and AI-driven analytics, with a focus on muscle heterogeneity, fiber type regulation, and bone–muscle communication.

Honors & Awards

- 2025 Young Investigator Award, Korean Society for Bone and Mineral Research, Seoul, South Korea
- 2025 Faculty Special Award of 2025 KAIST Q-Day, Korea Advanced Institute of Science and Technology, Daejeon, South Korea
- 2021 NEBS–GENOSCO Award, New England Bioscience Society, Boston, MA, USA
- 2013 Early Career Investigator Awards of Excellence, Kern Lipid Conference, Vail, Colorado, USA
- 2012 Best Student Presentation, Annual Cell Regulation Symposium, University of Texas Southwestern Medical Center, Dallas, Texas, USA

Publications

- Shimonty, A., Pin, F., Prideaux, M., Peng, G., Huot, J.R, Kim, H., Rosen, C.J., Spiegelman, B.M., Bonewald, L.F. “Deletion of FNDC5/Irisin modifies murine osteocyte function in a sex-specific manner” eLife, 12:RP92263, 2024.
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- Estell, E., Le, P., Vegting, Y., Kim, H., Wrann, C., Bouxsein, M., Nagano, K., Baron, R., Spiegelman, B., Rosen, C., “Irisin directly stimulates osteoclastogenesis and bone resorption in vitro and in vivo” eLife, 9:e58172, 2020.
- Oguri, Y*, Shinoda, K*, Kim, H*, and et al. “CD81 Controls Beige Fat Progenitor Cell Growth and Energy Balance via FAK Signaling” Cell, 182(3):563–577.e20, 2020 (* Equal contribution as a co-first author).
- Kim, H., and et al. “Irisin Mediates Effects on Bone and Fat via αV Integrin Receptors” Cell, 175: 1756–1768, 2018.

