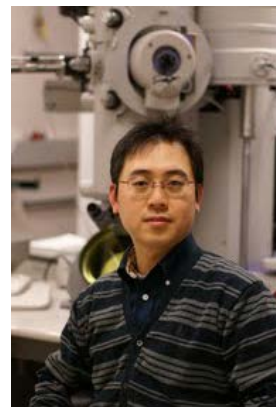


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Educations & Training

1995. 3 ~ 1999. 2 B.S., KAIST, Department of Biological Science (Republic of Korea).
1999. 3 ~ 2001. 2 M.S., KAIST, Department of Biological Science (Republic of Korea).
 (Advisor : Ook Joon Yoo)
2001. 3 ~ 2005. 8 Ph.D., KAIST, Department of Biological Science (Republic of Korea).
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2005. 9 ~ 2006. 11 KAIST, Bio-medical Research Center (Republic of Korea).
2006. 11 ~ 2007.11 KAIST, Department of Chemistry (Republic of Korea).
2007.12 ~ 2011.8 University of California, San Francisco, Department of Biophysics & Biochemistry (USA).
 (Advisor : Yifan Cheng)

Professional Experiences

2011.8 ~ 2016.2 KAIST, GSMSE, Assistant Professor
2016.3 ~ Present KAIST, GSMSE, Associate Professor
2013.7 ~ 2016.02 Korean Society for Structural Biology, Board Member (Representative of Financial Committee)

Awards

1. **Award for Young Scientist**, Ministry of Science & Technology, Republic of Korea, 2007.
2. **Agarwal Award**, BMRC, KAIST, Republic of Korea, 2009.
3. **Ewon Assistant Professor**, KAIST, Republic of Korea, 2015.
4. **Prize for Academic excellence**, KAIST, Republic of Korea, 2017.

Research Interests

1. Understanding of Molecular Mechanism of Disease-related Protein Complex by the 3D Structural Study

- X-ray Crystallography and Single Particle EM & CryoEM

- Neuropsychiatric Disease - Synapse Protein and Synaptic Adhesion Complex etc.
- Spesis and Immune Disease – TLR4/MD2, LBP and CD14 etc.

2. Protein Engineering using Structural Information

- Development of Therapeutic Protein by Protein Engineering - Anti-Angiogenic Protein and/or Pro-Angiogenic Protein Therapeutics targeting VEGF/VEGFR1, Angiopoietin/Tie2, Wnt, TGF-beta signaling etc.
- Structure-based Engineering of Useful Enzymes – Lipase and CRISPR/Cas9 etc.

Publications

1. Kim JA, Kim D, Won SY, Han KA, Park D, Cho E, Yun N, An HJ, Um JW, Kim E, Lee JO, Ko J*, **Kim HM***. Structural Insights into Modulation of Neurexin-Neurologin Trans-synaptic Adhesion by MDGA1/Neurologin-2 Complex. **Neuron**. 2017 Jun 21;94(6):1121-1131.e6. doi: 10.1016/j.neuron.2017.05.034.
2. Kim SJ, **Kim HM***. Dynamic lipopolysaccharide transfer cascade to TLR4/MD2 complex via LBP and CD14. **BMB Rep**. 2017 Feb;50(2):55-57.
3. Ryu J-K, Kim SJ, Rah S-H, Kang JI, Jung HE, Lee D, Lee HK, Lee J-O, Park BS, Yoon T-Y*, **Kim HM***. Reconstruction of LPS transfer cascade reveals structural determinants within LBP, CD14 and TLR4-MD2 for efficient LPS recognition and transfer. **Immunity**. 2017 Jan 17;46(1):38-50. doi: 10.1016/j.immuni.2016.11.007.
4. Lee H, Hong D, Cho H, Kim JY, Park JH, Lee SH, **Kim HM**, Fakhrullin RF, Choi IS. Turning Diamagnetic Microbes into Multinary Micro-Magnets: Magnetophoresis and Spatio-Temporal Manipulation of Individual Living Cells. **Sci. Rep**. 2016 Dec 5;6:38517. doi: 10.1038/srep38517.
5. Das ND, Yin GN, Choi MJ, Song KM, Park JM, Limanjaya A, Ghatak K, Minh NN, Ock J, Park SH, **Kim HM**, Ryu JK, Suh JK. Effectiveness of Intracavernous Delivery of Recombinant Human Hepatocyte Growth Factor on ErectileFunction in the Streptozotocin-Induced Diabetic Mouse. **J Sex Med**. 2016 Nov;13(11):1618-1628. doi: 10.1016/j.jsxm.2016.09.017.
6. Kang H, Han KA, Won SY, **Kim HM**, Lee Y-H, Ko J, Um JW. Slitrk Missense Mutations Associated with Neuropsychiatric Disorders Distinctively Impair Slitrk Trafficking and Synapse Formation. **Front. Mol. Neurosci**. 2016 Oct 20;9:104.
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8. Choi Y, Nam J, Whitcomb DJ, Song YS, Kim D, Jeon S, Um JW, Lee SG, Woo J, Kwon SK, Li Y, Mah W, **Kim HM**,

- Ko J, Cho K, Kim E. SALM5 trans-synaptically interacts with LAR-RPTPs in a splicing-dependent manner to regulate synapse development. **Sci Rep.** 2016 May 26;6:26676.
9. Han KA, Woo D, Kim S, Choii G, Jeon S, Won SY, **Kim HM**, Heo WD, Um JW, Ko J. Neurotrophin-3 regulates synapse development by modulating TrkC-PTP σ synaptic adhesion and intracellular signaling pathways. **J. Neurosci.** 2016 Apr 27;36(17):4816-31.
 10. Lee JM, Kim JA, Yen TC, Lee IH, Ahn B, Lee Y, Hsieh CL, **Kim HM**, Jung Y. A Rhizavidin Monomer with Nearly Multimeric Avidin-Like Binding Stability Against Biotin Conjugates. **Angew Chem Int Ed Engl.** 2016 Mar 1;55(10):3393-7.
 11. Oh N, Kim K, Kim SJ, Park I, Lee JE, Seo YS, An HJ, **Kim HM***, Koh GY*. A Designed Angiopoietin-1 Variant, Dimeric CMP-Ang1 Activates Tie2 and Stimulates Angiogenesis and Vascular Stabilization in N-glycan Dependent Manner. **Scientific Reports.** 2015 Oct 19; 5:15291.
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 14. Kim YN, Kim JA, **Kim HM**, Jung Y. Green fluorescent protein nanopolygons as monodisperse supramolecular assemblies of functional proteins with defined valency. **Nat Commun.** 2015 May 14; DOI: 10.1038/ncomms8134
 15. Kim YR, Kim S, Choi JW, Choi SY, Lee SH, **Kim HM**, Hahn SK, Koh GY, Yun SH. Bioluminescence-activated deep-tissue photodynamic therapy of cancer. **Theranostics.** 2015; 5(8):805-817.
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Patents

1. **Ho Min KIM**, Jung-Eun LEE, Chan KIM, Gou Young KOH, Gyun Min LEE, GLYCOSYLATED VEGF DECOY RECEPTOR FUSION PROTEIN (US 14/740,158, June 15, 2015)
2. **Ho Min KIM**, Eun-Jin LIM, Hye Kyoung HONG, Kyu Hyung PARK and Se Joon WOO, METHOD OF TREATING EYE DISEASE USING GLYCOSYLATED VEGF DECOY RECEPTOR FUSION PROTEIN (US 14/740,194, June 15, 2015)
3. **Ho Min Kim**, Jung-Eun Lee, Chan Kim, Hye Kyoung Hong, Se Joon Woo, Gou Young Koh, Gyun Min Lee, GLYCOSYLATED VEGF DECOY RECEPTOR FUSION PROTEIN (PCT/US15/21096, 2015)
4. **Ho Min Kim**, Gou Young Koh, Jung-Eun Lee, Chan Kim and Gyun Min Lee, VEGF-GRAB AND METHOD FOR SUPPRESSING TUMOR ANGIOGENESIS AND PROGRESSION. (US Provisional Patent Pending, 2014)
5. Keehoon JUNG, **Ho Min KIM**, Hak-Zoo KIM, Jung-Eun LEE, Gyun Min LEE, Sun Chang KIM, Jie-Oh LEE, Hak-Sung KIM, Gou Young KOH, TLR4 decoy receptor protein, application number: PCT/US 08/13494.
6. **Kim HM**, Park BS, Jin MS, Yoo OK, Lee JO, Hybrid Leucine Rich Repeats (LRR) Technique (Provisional patent pending, 2007).
7. Kim HZ, Koh YJ, **Kim HM**, Jung KH, Jeon CJ, Koh GY, Fusion Proteins are Capable of Binding VEGF and Angiopoietin (Double Anti-Angiogenic Protein, DAAP) (US patent pending, 2007).