
BIOGRAPHICAL SKETCH

NAME: KIM, Myung Hee

POSITION TITLE: Principal Research Scientist of Metabolic Regulation Research Center, KRIBB

EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Chungnam National University, Daejeon, Korea	B.A.	02/1989	Food & Nutrition
Chungnam National University, Daejeon, Korea	Ph.D.	08/1997	Food Microbiology
Korea Research Institute of Bioscience & Biotechnology (KRIBB)	Postdoctoral	97/2000	Molecular Biology
University of Virginia, Charlottesville, VA	Research Associate	00/2004	Structural Biology

Positions and Employment

2006-2008 Senior Research Scientist, Systems Microbiology Research Center, KRIBB, Daejeon, Korea
2008-Present Principal Research Scientist, Infection and Immunity Research Laboratory, Metabolic Regulation Research Center, KRIBB, Daejeon, Korea
2009-Present Adjunct Professor, Dept. Biochemistry, Chungnam National University, Daejeon, Korea
2007-present Adjunct Professor, Biosystems and Bioengineering Program, University of Science and Technology, Daejeon, Korea

Other Experience and Professional Memberships

2011-Present Member, Governance Committee, Synchrotron Facility, Ministry of Science and ICT, Korea
2013-2015 Director, Infection and Immunity Research Center, KRIBB
2015-Present Vice president, Korean Society for Structural Biology
2015-Present Vice president, Korean Crystallographic Association
2016-2018 Scientific Committee member, International Union of Biochemistry and Molecular Biology (IUBMB) 2018

Honors

2012 The Best Scientist of This Year at KRIBB
2012 CJ BIO Award, The Microbiological Society of Korea
2013 Science and Technology Medal, Ministry of the Interior and Safety, Korea
2017 Donghun Biochemistry Award, Korean Society for Biochemistry and Molecular Biology

Research Interest

Multidisciplinary understanding of (1) microbe-host interaction, (2) molecular and cellular mechanisms of pathogenesis, and (3) innate immunity.

Recent Publication

Choi WS, Baek YH, Kwon JJ, Jeong JH, Park SJ, Kim YI, Yoon SW, Hwang J, Kim MH, Kim CJ, Webby RJ, Choi YK, Song MS. Rapid acquisition of polymorphic virulence markers during adaptation of highly pathogenic avian influenza H5N8 virus in the mouse. *Sci Rep.*, 7:40667, 2017

Kim YS, Yang CS, Nguyen LT, Kim JK, Jin HS, Choe JH, Kim SY, Lee HM, Jung M, Kim JM, Kim MH, Jo EK, Jang JC. Mycobacterium abscessus ESX-3 plays an important role in host inflammatory and pathological responses during infection. *Microbes Infect.*, 19(1):5-17, 2017

Lee EY, Lee HC, Kim HK, Jang SY, Park SJ, Kim YH, Kim JH, Hwang J, Kim JH, Kim TH, Arif A, Kim SY, Choi YK, Lee C, Lee CH, Jung JU, Fox PL, Kim S, Lee JS*, Kim MH*. Infection-specific phosphorylation of glutamyl-prolyl tRNA synthetase induces antiviral immunity. *Nat. Immunol.*, 17(11):1252-1262, 2016 (*Co-corresponding authors)

Lee SJ, Birhanu BT, Awji EG, Kim MH, Park JY, Suh JW, Park SC. BaeR protein acts as an activator of nuclear factor-kappa B and Janus kinase 2 to induce inflammation in murine cell lines. *Can J Microbiol.* 62(9):753-61, 2016

Kim DG, Lee JY, Lee JH, Cho HY, Kang BS, Jang SY, Kim MH, Guo M, Han JM, Kim SJ, Kim S. Oncogenic Mutation of AIMP2/p38 Inhibits Its Tumor-Suppressive Interaction with Smurf2. *Cancer Research*, 76(11):3422-3436, 2016

Koh S, Hwang J, Guchhait K, Lee EG, Kim SY, Kim S, Lee S, Chung JM, Jung HS, Lee SJ, Ryu CM, Lee SG, Oh TK, Kwon O*, Kim MH*. Molecular Insights into Toluene Sensing in the TodS/TodT Signal Transduction System. *J. Biol. Chem.*, 291(16):8575-8590, 2016 (*Co-corresponding authors)

Lee MS, Kwon H, Lee EY, Kim DJ, Park JH, Tesh VL, Oh TK, Kim MH. Shiga Toxins Activate the NLRP3 Inflammasome Pathway to Promote both Production of Proinflammatory Cytokine Interleukin-1 β and Apoptotic Cell Death. *Infection and Immunity*, 84(1):172-186, 2016

Lee MS, Kwon H, Nguyen LT, Lee EY, Lee CY, Choi SH, Kim MH. Shiga Toxins Trigger the Secretion of Lysyl-tRNA Synthetase to Enhance Proinflammatory Responses. *J. Microbiol. Biotechnol.*, 26(2):432-439, 2016

Hwang J, Nguyen LT, Jeon YH, Lee CY, Kim MH. Crystal structure of fully oxidized human thioredoxin. *BBRC*, 467(2):218-222, 2015

Lee HR, Mitra J, Lee S, Gao SJ, Oh TK, Kim MH, Ha T, Jung JU. KSHV vIRF4 perturbs the G1-S cell cycle progression via deregulation of cyclin D1. *J. Virol.*, 90(2):1139-43, 2015

Yang CS, Kim JJ, Kim TS, Lee PY, Kim SY, Lee HM, Shin DM, Nguyen LT, Lee MS, Jin HS, Kim KK, Lee CH, Kim MH, Park SG, Kim JM, Choi HS, Jo EK. Small heterodimer partner interacts with NLRP3 and negatively regulates activation of the NLRP3 inflammasome. *Nat. Commun.*, 6:6115, 2015

Park JH, Jo Y, Jang SY, Kwon H, Irie Y, Parsek MR, Kim MH, Choi SH. The cabABC Operon Essential for Biofilm and Rugose Colony Development in *Vibrio vulnificus*. *PLOS Pathogens*, 11(9):e1005192, 2015

Baek YH, Song MS, Lee EY, Kim YI, Kim EH, Park SJ, Park KJ, Kwon HI, Pascua PN, Lim GJ, Kim S, Yoon SW, Kim MH, Webby RJ, Choi YK. Profiling and characterization of potentially multidrug-resistant influenza neuraminidase 1 (N1) strains against neuraminidase inhibitors. *J. Virol.*, 89:287-99, 2015

Hwang J, Suh HW, Jeon YH, Hwang E, Nguyen LT, Yeom J, Lee SG, Lee C, Kim KJ, Kang BS, Jeong JO, Oh TK, Choi I, Lee JO, Kim MH. The structural basis for the negative regulation of thioredoxin by thioredoxin-interacting protein. *Nat. Commun.*, 5:2958, 2014

Fu Y, Kim Y, Jin KS, Kim HS, Kim JH, Wang D, Park M, Jo CH, Kwon NH, Kim D, Kim MH, Jeon YH, Hwang KY, Kim S, Cho Y. Structure of the ArgRS-GlnRS-AIMP1 complex and its implications for mammalian translation. *PNAS*, 111:15084-15089, 2014

Hwang J, Kim BS, Jang SY, Lim JG, You DJ, Jung HS, Oh TK, Lee JO, Choi SH*, Kim MH*. Structural insights into the regulation of sialic acid catabolism by the *Vibrio vulnificus* transcriptional repressor NanR. PNAS, 110:E2829-2837, 2013 (*Co-corresponding authors)

Pascua PN, Song MS, Lee JH, Baek YH, Kwon HI, Park SJ, Choi EH, Lim GJ, Lee OJ, Kim SW, Kim CJ, Sung MH, Kim MH, Yoon SW, Govorkova EA, Webby RJ, Webster RG, Choi YK. Virulence and transmissibility of H1N2 influenza virus in ferrets imply the continuing threat of triple-reassortant swine viruses. PNAS, 109:15900-15905, 2012

Lee HR, Choi WC, Lee S, Hwang J, Hwang E, Guchhait K, Haas J, Toth Z, Jeon YH, Oh TK*, Kim MH*, Jung JU*. Bilateral inhibition of HAUSP deubiquitinase by a viral interferon regulatory factor protein. Nat. Struct. Mol. Biol., 18:1336-1344, 2011 (*Co-corresponding authors)

Kim BS, Hwang J, Kim MH, Choi SH. Cooperative Regulation of the *Vibrio vulnificus* nan Cluster by NanR, cAMP Receptor Protein, and N-Acetylmannosamine-6-Phosphate. J. Biol. Chem., 286:40889-40899, 2011

Hwang J, Kim Y, Kang HB, Jaroszewski L, Deacon AM, Lee H, Choi WC, Kim KJ, Kim CH, Kang BS, Lee JO, Oh TK, Kim JW, Wilson IA, Kim MH. Crystal structure of the human N-Myc downstream-regulated gene 2 protein provides insight into its role as a tumor suppressor. J. Biol. Chem., 286: 12450-12460, 2011