

C.V.

Full Name: Myung-Shik Lee

Organization: Yonsei University College of Medicine

Position & Title: Professor

Educational background & professional experience (in sequence of the latest year)

Professor, Severance Biomedical Science Institute & Dept. of Internal Medicine, Yonsei University College of Medicine (2015 ~)

Professor, Dept. of Medicine, Sungkyunkwan University Medical School (1997 ~2015)

Staff, Dept. of Medicine, Samsung Medical Center (1995 ~2015)

Postdoc, The Scripps Research Institute (1992-1995)

Ph.D. at College of Medicine, Seoul National University, 1990

M.D. at College of Medicine, Seoul National University, 1981

Publications

- 1) Kim SH, Kim G, Han DH, Lee M, Kim I, Kim B, Kim KH, Song YM, Yoo JE, Wang H, Bae SH, Lee YH, Lee BW, Kang ES, Cha BS, **Lee M-S**. Ezetimibe ameliorates steatohepatitis via AMP activated protein kinase-Tfeb-mediated activation of autophagy and NLRP3 inflammasome inhibition. *Autophagy*, in press, 2017
- 2) Lee HY, Kim J, Quan W, Lee J-C, Kim M-S, Kim SH, Bae J-W, Hur KY, **Lee M-S**. Autophagy deficiency in myeloid cells increases susceptibility to obesity-induced diabetes and experimental colitis. *Autophagy* 12:1390, 2016
- 3) Kim J, Cheon H, Jeong YT, Quan W, Kim KH, Cho JM, Lim Y-M, Oh SH, Jin S-M, Kim JH, Lee M-K, Kim S, Komatsu M, Kang S-W, **Lee M-S**. Amyloidogenic peptide oligomer accumulation in autophagy-deficient b-cells leads to diabetes. *J Clin Invest* 124: 3311, 2014
- 3) Lim YM, Lim HJ, Hur KY, Quan W, Lee HY, Cheon H, Ryu D, Koo SH, Kim HL, Kim J, Komatsu M, **Lee M-S**. Systemic autophagy insufficiency compromises adaptation to metabolic stress & facilitates progression from obesity to diabetes. *Nat Commun* 5:4934, 2014
- 4) Shin N-R, Lee J-C, Lee Y-Y, Kim M-S, Whon TW, **Lee M-S**, Bae J-W. (Co-correspondence) An increase in the Akkermansia sp. population induced by metformin treatment improves glucose homeostasis in diet-induced obese mice. *Gut* 63: 727, 2014
- 5) Kim KH, Jeong YT, Oh H, Kim S-H, Cho JM, Kim Y-N, Kim SS, Kim D-H, Hur KY, Kim HK, Koh T, Han J, Kim H, Kim J, Back SH, Komatsu M, Chen H, Chan DC, Konishi M, Itoh N, Choi CS, **Lee M-S**. Autophagy deficiency leads to protection from obesity and insulin resistance by inducing FGF21, a 'mitokine'. *Nature Medicine* 19:83, 2013
- 6) Kim KH, **Lee M-S**. Autophagy- a key player in cellular and body metabolism. *Nature Rev Endocrinol* 10: 322, 2014
- 7) Jung H-S, Chung KW, Kim JW, Kim J, Komatsu M, Tanaka K, Nguyen YH, Kang TM, Yoon K-H, Kim J-W, Jeong YT, Han MS, Lee M-K, Kim K-W, Shin J, **Lee M-S**. Loss of Autophagy Diminishes Pancreatic β -Cell Mass and Function with Resultant Hyperglycemia. *Cell Metab* 8:318, 2008
- 8) Kim HS, Han MS, Chung KW, Kim S, Kim E, Kim MJ, Jang E, Lee HA, Youn J, Akira S, **Lee M-S**. Toll-like receptor 2 senses b-cell death and contributes to the initiation of autoimmune diabetes. *Immunity* 27:321-333, 2007

Brief Biography

Dr. Myung-Shik Lee is a physician-scientist (M.D., Ph.D.) who is studying the pathogenesis of metabolic diseases from the viewpoint of immunity, inflammation and autophagy.

Dr. Lee is has demonstrated the role of autophagy in inflammation, mitochondrial function or type 2 diabetes, and characterized the molecular pathway and biological significance of 'mitokine' response. He also characterized the initial event in autoimmune type 1 diabetes: apoptotic b-cells not removed in time undergo secondary necrosis and initiate autoimmunity through TLR2. Thus, we has contributed to the understanding of both type 1 and type 2 diabetes, which may lead to the discovery of new therapeutic agents based on the novel concept.