

Curriculum Vitae

Yong-Hyun Han (Ph.D.)



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► Personal Data

Position: Assistant Professor
Affiliation: Laboratory of Pathology & Physiology, College of Pharmacy, Kangwon National University

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► Professional Experiences

Sep 2020 – Present Laboratory of Pathology & Physiology, College of Pharmacy, Kangwon National University
Assistant Professor
Chuncheon, South Korea

May 2019 – Aug 2020 Department of Pathology and Immunology, Washington University School of Medicine in St. Louis
Postdoctoral Research Associate
Saint Louis, MO, USA
Advisor: Gwendalyn Randolph, Ph.D.

Mar 2018 - Apr 2019 Research Institute of Pharmaceutical Sciences, Seoul National University
Postdoctoral Research Associate
Seoul, South Korea
Advisor: Mi-Ock Lee, Ph.D.

► Education

Sep 2013 - Feb 2018 College of Pharmacy, Seoul National University,
Ph.D., Pathology & Physiology (*Advisor. Mi-Ock, Lee*)
Seoul, South Korea

Mar 2011- Feb 2013 College of Pharmacy, Seoul National University,
M.S., Pathology & Physiology (*Advisor. Mi-Ock, Lee*)
Seoul, South Korea

Mar 2007- Feb 2011 College of Pharmacy, Kangwon National University,

B.S., Biochemistry (*Advisor. Hyun-Pyo, Kim*)
Chuncheon, South Korea

► **License**

1. *Mar. 2011*, Pharmacist's License in Korea, Ministry of Health and Welfare

► **Main Research Field**

- Understanding pathological mechanisms in nonalcoholic fatty liver, and intestinal failure-associated liver injuries ranges from transcriptome to epigenome levels
- Studying circulatory metabolism about gut-liver axis in mesenteric veins and lymphatic vessels with lipoprotein and immune cells
- Investigating pathological metabolites in metabolic fatty liver and intestinal diseases
- Therapeutic candidate discovery for targeting nuclear receptors and transcriptional factors
- Immunometabolism study based on cellular function especially in monocytes, neutrophils, and macrophages including kupffer cells

► **Publications**

1. **Han YH***, Onufer EJ, Huang LH, Sprung RW, Davidson WS, Czepielewski RS, Wohltmann M, Sorci-Thomas MG, Warner BW, Randolph GJ*. Intestinal epithelium-derived high density lipoprotein restrains liver injury via the portal vein. *Science*, (2021) Minor revision. (IF: **41.846**; **2.11%**)
2. Onufer EJ*, **Han YH***, Courtney CM, Steinberger AE, Tecos ME, Sutton S, Sescleifer A, Ou J, Sanguinetti Czepielewski R, Randolph GJ, Warner BW. Liver injury after small bowel resection is prevented in obesity-resistant 129S1/SvImJ mice. *Am J Physiol Gastrointest Liver Physiol*, (2021) Mar 17. doi: 10.1152/ajpgi.00284.2020. Online ahead of print. (IF: **3.725**; **16.67%**)
3. **Han YH**, Kim HJ, Lee MO. ROR α regulates hepatic lipolysis by inducing transcriptional expression of PNPLA3 in mice, *Mol Cell Endocrinol*, (2021) Feb 15;522:111122. (IF: **3.871**; **29.37%**)
4. **Han YH**, Kim HJ, Choi H, Lee S, Lee MO. ROR α autoregulates its transcription via MLL4-associated enhancer remodeling in the liver, *Life Sci*, (2020) Sep 1;256:118007. (IF: **3.647**; **27.96%**)
5. Onufer EJ, **Han YH**, Czepielewski R, Courtney CM, Sutton S, Randolph GJ*, Warner BW*. Effects of high fat diet on liver injury after small bowel resection. *J Pediatr Surg*, (2020) Jun;55(6):1099-1106.
6. Kim JY*, **Han YH***, Nam MW, Kim HJ, Lee MO. ROR α suppresses interleukin-6-mediated hepatic acute phase response. *Sci Rep*, (2019) Aug 13;9:11798. (IF: **3.998**; **23.24%**)
7. **Han YH**, Shin KO, Khadka D, Kim JY, Kim HJ, Cho WJ, Cha JY, Lee YM, Lee BJ, Lee MO. A maresin 1/ROR α /12-lipoxygenase autoregulatory circuit prevents inflammation and progression of nonalcoholic steatohepatitis. *J Clin Invest*, (2019) Mar 11;130:1684-1698. (IF: **11.864**; **1.81%**)
8. **Han YH**, Kim HJ, Na H, Nam MW, Kim JY, Kim JS, Koo SH, Lee MO. ROR α Induces KLF4-Mediated M2 Polarization in the Liver Macrophages that Protect against Nonalcoholic Steatohepatitis. *Cell Rep*, (2017) Jul 5;20:124-135. (IF: **8.109**; **15.13%**)
9. Kim HJ, **Han YH**, Na H, Kim JY, Kim T, Kim HJ, Shin C, Lee JW, Lee MO. Liver-specific deletion

of ROR α aggravates diet-induced nonalcoholic steatohepatitis by inducing mitochondrial dysfunction. *Sci Rep.* (2017) Nov 22;7:16041.

10. Na TY, Kim GH, Oh HJ, Lee MH, **Han YH**, Kim KT, Kim JS, Kim DD, Lee MO. The trisaccharide raffinose modulates epidermal differentiation through activation of liver X receptor. *Sci Rep*, (2017) Mar 7;7:43823.

11. **Han YH**, Kim DK, Na TY, Ka NL, Choi HS, Lee MO. ROR α switches transcriptional mode of ERR γ that results in transcriptional repression of CYP2E1 under ethanol-exposure. *Nucleic Acids Res*, (2016) Feb 18;44:1095-1104. (IF: 11.501; 4.88%)

12. Na TY, **Han YH**, Ka NL, Park HS, Kang YP, Kwon SW, Lee BH, Lee MO. 22-S-Hydroxycholesterol protects against ethanol-induced liver injury by blocking the auto/paracrine activation of MCP-1 mediated by LXR α . *J Pathol*, (2015) Apr;235: 710–720.

13. **Han YH**, Kim HJ, Kim EJ, Kim KS, Hong S, Park HG, Lee MO. ROR α decreases oxidative stress through the induction of SOD2 and GPx1 expression and thereby protects against nonalcoholic steatohepatitis in mice. *Antioxid Redox Signal*, (2014) Nov 20;21: 2083-2094. (IF: 6.323; 9.44%)

14. Kim EJ, Choi YK, **Han YH**, Kim HJ, Lee IK, Lee MO. ROR α suppresses proliferation of vascular smooth muscle cells through activation of AMP-activated protein kinase. *Int J Cardiol*, (2014) Aug 20;175: 515-521.

► International Patents

Patent Number: U.S. Patent Application No. 15/752,079, Issued Date. August 12, 2018

Title: Pharmaceutical Composition for Preventing or Treating Autoimmune Diseases

Inventors: Lee, Mi-Ock; Park, Hyeung-Geun; Cho, Mi-La; **Han, Yong-Hyun**; Kim, Hyeon-Ji; Park, Jin-Sil

► Research Support

09/2014 – 02/2016 ~20,000\$/yr Basic Academic Discipline Fellowship (SNU)

09/2019 – 08/2020 ~44,000\$/yr NRF Fellowship for Global Post Doctor

03/2021 – Present ~130,000\$/yr NRF Funding grant for Excellent Young Researcher

► Honors and Awards

1. Oct 2019, **Promising Pharmacologist Award**, Pharmaceutical Society of Korea

1. Oct 2018, **Best Poster Award**, Pharmaceutical Society of Korea

1. Oct 2018, **Best Poster Award**, Medical Research Center of Korea

2. Feb 2018, **Song-Am Award (Best Research Paper Award)**, Seoul National University

3. Jun 2017, **Best Poster Award**, Pharmaceutical Society of Korea

4. Oct 2014, **Best Poster Award**, Korean Society of Applied Pharmacology.

5. May 2013, **Best Research Award**, Korean Society for Biochemistry and Molecular Biology (KSBMB).