Protein arginine methyltransferases as modulators of lipid metabolism and inflammation and the relevance for atherosclerosis

Zhang, Y.

PHD PORTFOLIO

Courses

2020

Academic Writing for PhD (Leiden University)

2018

Time Management, self-management (Leiden University)

Communication in science (Leiden University)

Effective communication (Leiden University)

Introduction to teaching & supervision for LACDR PhD students (ICLON, Leiden University)

LACDR PhD Introductory course on drug research (LACDR, Leiden University)

LACDR Data management course (Library, Leiden University)

Scientific conduct (Leiden University)

Hartstichting PhD training course (Dutch Heart Foundation)

International Atherosclerosis Research Summer School (iARS, Hamburg, Germany)

2017

Course on Laboratory Animal Science (LUMC)

Poster and presentations at (inter)national meetings

2021

LACDR spring symposium, LACDR, Leiden University, Leiden, the Netherlands (Oral online)

2020

LACDR spring symposium, LACDR, Leiden University, Leiden, the Netherlands (Oral online)

European Lipoprotein Club meeting (ELC), Tutzing, Germany (Poster)

2019

European Atherosclerosis Society (EAS) Maastricht, the Netherlands (E-Poster)

The Scandinavian Society for Atherosclerosis Research (SSAR), Humlebæk, Denmark (Poster)

LACDR spring symposium, LACDR, Leiden University, Leiden, the Netherlands (Poster)

2018

Symposium of Rembrandt Institute of Cardiovascular Science (RIC), Noordwijkerhout, the Netherlands (Poster)

International Atherosclerosis Research Summer School (iARS), Hamburg, Germany (Oral)

LACDR spring symposium, LACDR, Leiden University, Leiden, the Netherlands (Poster)

LACDR PhD Introductory Course on Drug Research, Leiden, the Netherlands (Oral)

LIST OF PUBLICATIONS

Zhang, Y., de Boer, M., van der Wel, E. J., Van Eck, M., & Hoekstra, M. (2021). PRMT4 inhibitor TP-064 inhibits the pro-inflammatory macrophage lipopolysaccharide response in vitro and ex vivo and induces peritonitis-associated neutrophilia in vivo. *Biochimica et Biophysica Acta (BBA)-Molecular Basis of Disease*, *1867*(11), 166212.

Zhang, Y., Verwilligen, R. A., de Boer, M., Sijsenaar, T. J., Van Eck, M., & Hoekstra, M. (2021). PRMT4 inhibitor TP-064 impacts both inflammatory and metabolic processes without changing the susceptibility for early atherosclerotic lesions in male apolipoprotein E knockout mice. *Atherosclerosis*, *338*, 23-29.

Hoekstra, M., Liu, Q., Zhang, Y., van der Wel, E. J., Le Dévédec, S. E., & Van Eck, M. (2022). Hypocholesterolemic phospholipid transfer protein knockout mice exhibit a normal glucocorticoid response to food deprivation. *American Journal of Translational Research*, *14*(3), 1884.

Snip, O. S., Hoekstra, M., Zhang, Y., Geerling, J. J., & Van Eck, M. (2022). 2-Hydroxypropyl-beta-cyclodextrin Treatment Does Not Induce Atherosclerotic Lesion Regression in Western-Type Diet-Fed Apolipoprotein E Knockout Mice. *Biomolecules*, *12*(9), 1205.

Zhang, Y., Sijsenaar, T. J., Bernabé Klein M. N., van der Wel, E. J., Van Eck, M., & Hoekstra, M. PRMT1 inhibitor TC-E 5003 reduces the development of non-alcoholic fatty liver disease and atherosclerotic lesions in Western-type diet-fed LDL receptor knockout mice (manuscript submitted)

Zhang, Y., Verwilligen, R. A. F., Van Eck, M., & Hoekstra, M. PRMT5 inhibitor GSK3326595 enhances interferon gamma-stimulated pro-inflammatory macrophage polarization and increases hepatic triglyceride levels without affecting early atherosclerotic lesion development in mice (revised for publication in Journal of Cellular and Molecular Medicine)

Slager, S. W., de Jong L. M., Verwilligen, R. A. F., Zhang, Y., Hawinkels, L. J. A. C., Manson, M. L., Van Eck, M., Hoekstra, M. PRMT1 inhibitor TC-E 5003 suppresses hepatic GLI1 signaling and protects mice from cholestasis-associated fibrosis development (manuscript in preparation)

CURRICULUM VITAE

Yiheng Zhang was born on November 25th 1991 in Nanning, Guangxi province, China. In 2010, she started her higher education at Ocean University of China, Qingdao, China, majoring in Biology, with the specialization Marine Biology. From 2015 to 2017, she performed her Master studies Biology at Wageningen University and Research in Wageningen, the Netherlands. During the specialization Health and Disease, she performed a minor internship related to diet-induced obesity and white adipose tissue morphology. Her master thesis from the Human and Animal Physiology group was entitled: "The effect branched-chain amino acids on two markers of M1 macrophage inflammation: phagocytotic activity and lipid body formation".

In 2017, Yiheng Zhang was sponsored by the Chinese Scholarship Council to join the Division of BioTherapeutics of the Leiden Academic Centre of Drug Research (LACDR), Leiden University as a PhD student. She started investigating the role of macrophages in atherosclerosis under supervision of Prof. dr. Miranda van Eck and Dr. Menno Hoekstra. During this PhD study period, her research was mainly focused on the role of PRMTs in metabolism and inflammation during atherosclerosis development. By the end of her practical PhD period in 2021, two research articles were already published as first author. In 2018, 2019, and 2020, she won prizes for the best poster presented at the LACDR symposium. During the PhD period, Yiheng also supervised 10 bachelor students and 4 master students from Biopharmaceutical Sciences. For this purpose, the LACDR provided her with a 3-month teaching extension from December 2021 until February 2022. In March 2022, she started working as a field application scientist with GenScript Biotech B.V. in Rijswijk, the Netherlands.