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## Novel targets in the liver to treat cardiometabolic diseases

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## List of Publications

1. **Ge X**, Jarrett KE, Nordestgaard LT, Yang X, Afkir S, Lalai RA, Streefland TCM, Pronk ACM, Ying Z, Kooijman S, Yin G, Smit M, Baltazar-Nuñez R, Blomberg N, Heijink M, Sidorov I, Giera M, Wang Y, van de Sluis B, de Aguiar Vallim TQ, Rensen PCN<sup>#</sup>, Schönke M. Hepatocyte-specific disruption of *Abca6* increases non-HDL cholesterol and aggravates atherosclerosis by attenuating LDL receptor-mediated cholesterol clearance. *Submitted*.
2. Ying Z\*, van der Schatte Olivier A\*, Pereira PM, Kooijman EJM, **Ge X**, Afkir S, van Velden FHP, Pereira Arias-Bouda LM, de Geus-Oei LF, Boon MR, Poot A, van der Wildt B, Beaino W, Kooijman S, Windhorst AD<sup>#</sup>, Rensen PCN<sup>#</sup>. A novel <sup>18</sup>F-labeled triglyceride tracer for detecting brown fat activity and browned white fat with high sensitivity by PET-CT. *Submitted*.
3. Vos D, Barbosa M, Heida A, Caillaud A, **Ge X**, Tissink J, Koster M, Smit M, Huijkman N, Kloosterhuis N, Girardeau A, Bloks V, Havinga R, Jonker J, Reggiori F, Mari M, Scheja L, Kuipers F, Kooijman S, Heeren J, De Boer JF, Rensen PCN, Rimbart A, Wolters J, Kuivenhoven JA, Verzijl C, van de Sluis B<sup>#</sup>. Hepatic retromer is essential for systemic cholesterol homeostasis by regulating lysosomal cholesterol metabolism. *Revision submitted*.
4. Feng R, Spieth L, Liu L, Berghoff S, Franz J, Liu Q, Wang Z, Tiwari V, Vitale S, Frerich S, Florensa S, Junker N, Huber L, Keller M, Müller C, Bracher F, **Ge X**, Rensen PCN, Kooij G, Hosang L, Chorny S, Dichgans M, Gokce O, Saher G, Stadelmann C, Giera M, Groh J<sup>#</sup>, Simons M<sup>#</sup>. Molecular and spatial profiling of multiple sclerosis lesions identifies dysfunctional lipid efflux as a driver of chronic active inflammation. **Immunity** **2025**, *online ahead of print*.
5. **Ge X\***, Sotin T\*, Schönke M, Vince L, Thouzeau A, Frey S, Lorant V, Krul L, Pronk ACM, Lalai R, Streefland TCM, Afkir S, Dijk W, Smati S, Heijink M, Blomberg N, Giera M, Di Filippo M, Moulin P, Kooijman S, Cariou B<sup>#</sup>, Rensen PCN<sup>#</sup>, Le May C<sup>#</sup>. A rare gain of function variant of hepatic lipase attenuates hypercholesterolemia and atherosclerosis in mice via an LDL receptor-independent mechanism. **Cardiovasc Res** **2025**, 121: 1024–1035.
6. **Ge X**, Slütter B, Lambooi JM, Zhou E, Ying Z, Agirman C, Heijink M, Rimbart A, Guigas B, Kuiper J, Müller C, Bracher F, Giera M, Kooijman S, Rensen PCN, Wang Y, Schönke M<sup>#</sup>. DHCR24 inhibitor SH42 increases desmosterol without preventing atherosclerosis development in mice. **iScience** **2024**, 27: 109830.
7. Zhou E, **Ge X**, Nakashima H, Li R, van der Zande HJP, Liu C, Li Z, Müller C, Bracher F, Mohammed Y, de Boer JF, Kuipers F, Guigas B, Glass CK, Rensen PCN, Giera M, Wang Y<sup>#</sup>. Inhibition of DHCR24 activates LXR $\alpha$  to ameliorate hepatic steatosis and inflammation. **EMBO Mol Med** **2023**, 5: e16845.

8. Ying Z\*, van Eenige R\*, **Ge X**, van Marwijk C, Lambooi JM, Guigas B, Giera M, de Boer JF, Coskun T, Qu H, Wang Y, Boon MR, Rensen PCN, Kooijman S#. Combined GIP receptor and GLP1 receptor agonism attenuates NAFLD in male APOE\*3-Leiden.CETP mice. **EBioMedicine** **2023**, 93: 104684.
9. **Ge X**, Wang A, Ying Z, Zhang L, Su W, Cheng K, Feng C, Zhou Y, Zhang L#, Wang T#. Effects of diets with different energy and bile acids levels on growth performance and lipid metabolism in broilers. **Poult Sci** **2019**, 98: 887–895.
10. Ying Z\*, **Ge X\***, Zhang H, Su W, Li Y, Zhou L, Zhang L, Wang T#. Effects of dietary methionine restriction on postnatal growth, insulin sensitivity, and glucose metabolism in intrauterine growth retardation pigs at 49 and 105 d of age. **J Anim Sci** **2019**, 97: 610–619.
11. Feng C, Bai K, Wang A, **Ge X**, Zhao Y, Zhang L, Wang T#. Effects of dimethylglycine sodium salt supplementation on growth performance, hepatic antioxidant capacity, and mitochondria-related gene expression in weanling piglets born with low birth weight. **J Anim Sci** **2018**, 96: 3791–3803.

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## Curriculum Vitae

Xiaoke Ge was born on September 3<sup>rd</sup>, 1992, in Chuzhou, Anhui province, China. After graduating from the Chuzhou high school in Chuzhou, she started her bachelor's program with a major in Animal Science in September 2012, at Anhui Science and Technology University, Chuzhou, Anhui province, China. In June 2016, she graduated and obtained her BSc degree with honors.

In September 2016, she started her master's program, Animal Nutrition and Feed Science, at Nanjing Agricultural University Nanjing, China. During her master's thesis, she worked on a 3-year research project entitled 'Effects of diets with different fat and bile acid levels on growth performance and lipid metabolism in broilers' under the supervision of prof. dr. Tian Wang. In June 2019, she graduated and obtained her master's degree with honors.

In November 2020, Xiaoke was granted a scholarship from the China Scholarship Council, which allowed her to start her PhD program in the group of prof. dr. Patrick Rensen at the Division of Endocrinology, Department of Medicine of the Leiden University Medical Center, Leiden, The Netherlands, under supervision of prof. dr. Patrick Rensen, dr. Dr. Milena Schönke and prof. dr. Yanan Wang. Her research mainly focused on exploring novel targets in the liver to treat cardiometabolic diseases. The majority of her doctoral research is presented in this thesis, which was completed by June 2025.

From October 2024 until present, she has worked as a postdoctoral researcher in the same research group on a project granted by the Dutch Heart Foundation to dr. Sander Kooijman to continue exploring novel strategies for treating cardiometabolic diseases. In June 2025, she obtained a grant from the Leiden University Fund (LUF) for her research proposal to investigate the effects of gut bacteria on atherosclerosis, and their potential as target in the therapy of atherosclerotic cardiovascular diseases.



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