Haoyang ZHANG

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Sölvegatan 19, Lund, +46(0)762811502 Sweden haoyang.zhang@med.lu.se **EDUCATION** • PhD (Bioinformatics), Sun Yat-sen University Sep. 2018 - Jun. 2022 School of Data and Computer Science, Advisor: Yuedong Yang • MSc (Epidemiology & Biostatistics), The Chinese University of Hong Kong Sep. 2016 - Jun. 2017 School of Public Health and Primary Care, Advisor: Maggie Haitian Wang • BMed (Preventive Medicine), Sun Yat-sen University Sep. 2010 - Jun. 2016 School of Public Health **EXPERIENCE** Assistant Researcher, Lund University Nov. 2025 -Department of Clinical Sciences Malmö, Advisor: Niklas Mattson-Carlgren • Postdoctoral Researcher, Lund University Nov. 2023 - Oct. 2025 Department of Experimental Medical Science, Advisor: Mauno Vihinen • Visiting Researcher, Children's Hospital of Fudan University Jun. 2023 - Oct. 2023 Center for Molecular Medicine • Assistant Researcher, Children's Hospital of Jiangnan University Dec. 2022 - Oct. 2023 Department of Pediatric Laboratory • Research Assistant, The University of Hong Kong Jan. 2018 – May. 2018 School of Biological Sciences, Advisor: Tanja Sobko • Research Assistant, The Chinese University of Hong Kong Jun. 2017 - Dec. 2017 School of Public Health and Primary Care, Advisor: Maggie Haitian Wang **GRANTS** • Developing a Comprehensive Database for Investigating Genetic Relationships within Phenotypes 2024 - 2026The Royal Physiographic Society in Lund, 80,000 SEK Unveiling Networked Causality Landscape for Novel Causal Connections (KR2024-0123) 2024 - 2025The Gyllenstierna Krapperup's Foundation, 20,000 SEK **PRESENTATIONS** • IEEE International Conference on Bioinformatics and Biomedicine (BIBM) Dec. 2021 IEEE Computer Society, Virtual Conference. Oral presentation. Workshop on Interdisciplinary Research of Mathematics, Computer Science and Biology May. 2019 Institute of Mathematics and Systems Science, Chinese Academy of Sciences, Beijing. Oral presentation.

PUBLICATIONS

Room B1341a, BMC,

(# contributed equally, * corresponding). Full list at my Google Scholar. First author:

- 1. **Zhang H**, Luan X, Vihinen M*. Proteome-wide analysis of human deletions. *Proteins: Structure, Function and Bioinformatics*. 2025. [article] (accepted)
- 2. **Zhang H**, [...], Vihinen M*. There will always be variants of uncertain significance. Analysis of VUSs. *NAR Genomics and Bioinformatics*. 2024. [article]

- 3. **Zhang H***, [...], Zheng L. Letter to the Editor: Is Omeprazole a contributing risk factor for osteoarthritis (OA)? *Journal of Translational Medicine*. 2024. [letter]
- 4. **Zhang H**#, [...], Chen Y*. Symptom profiles and vaccination status for COVID-19 after the adjustment of the dynamic zero-COVID policy in China: an observational study. *Journal of Medical Virology*. 2023. [article] [code]
- 5. **Zhang H**, [...], Zhao H*. Identification of putative causal relationships between type 2 diabetes and blood-based biomarkers in East Asians by Mendelian randomization. *American Journal of Epidemiology*. 2022. [article]
- 6. **Zhang H**, [...], Zhao H*. Mendelian randomization study reveals a population-specific putative causal effect of type 2 diabetes in risk of cataract. *International Journal of Epidemiology*. 2022. [article] [code]
- 7. **Zhang H**, [...], Yang Y*. DGAT-onco: A differential analysis method to detect oncogenes by integrating functional information of mutations. *IEEE BIBM*. 2021. [article] [code]

Corresponding author:

- 1. Wang R#, [...], **Zhang H***. Wearable Device–Measured Physical Activity and Risk of MAFLD in Adolescents. *American Journal of Preventive Cardiology*. 2025. [article] [code]
- 2. Chen H#, [...], **Zhang H***. Sex differences in the genetic relationship between type 2 diabetes and cataract: Insights from East Asian and European Populations. *Medicine Advances*. 2025. [article] (accepted)
- 3. Chen H#, [...], **Zhang H***. Resilience of Pediatric Healthcare Services in an Urban Hospital in China During the COVID-19 Pandemic in Late 2022.

 BMJ Paediatrics Open. 2025. [letter] [code]
- 4. Yang F#, [...], **Zhang H***. Potential Alternative and Novel Biomarkers for Paediatric MAFLD: exploratory evidence from a Chinese cohort.

 *BMC Gastroenterology. 2025. [article] [code]

Co-author:

- 1. Qi M, **Zhang H**, Xiu X, He D, Cooper DN, Yang Y, Zhao H*. Genetic evidence for T-wave area from 12-lead electrocardiograms to monitor cardiovascular diseases in patients taking diabetes medications. *Human Genetics*. 2024. [article]
- 2. Lu Z, **Zhang H**, Yang Y, Zhao H*. Sex differences of the shared genetic landscapes between type 2 diabetes and peripheral artery disease in East Asians and Europeans. *Human Genetics*. 2023. [article]
- 3. Lin S, **Zhang H**, Qi M, Cooper DN, Yang Y, Yang Y, Zhao H*. Inferring the genetic relationship between brain imaging-derived phenotypes and risk of complex diseases by Mendelian randomization and genome-wide colocalization.

 Neuroimage. 2023. [article]
- 4. Chen X, Chen S, Pang J, Huang R, You Y, **Zhang H**, Xiao J, Xue H, Ling W. Hepatic steatosis aggravates atherosclerosis via small extracellular vesicle-mediated inhibition of cellular cholesterol efflux. *Journal of Hepatology*. 2023. [article]
- 5. Xiu X#, **Zhang H**#, Xue A, Cooper DN, Yan L, Yang Y*, Yang Y*, Zhao H*. A causal relationship between type 2 diabetes and peripheral artery disease is evident in both Europeans and East Asians. *BMC Medicine*. 2022. [article]
- 6. Sun D, Jin Y, Wang T, Zheng K, Rios R, **Zhang H**, Targher G, Byrne C, Yuan W, Zheng M*. MAFLD and risk of CKD. *Metabolism*. 2021. [article]
- 7. Wang MH#*, Lou J#, Cao L#, Zhao S, Chan RW, Chan PK, Chan MC, Chong MK, Wu WK, Wei Y, **Zhang H**, Zee BC, Yeoh EK*. Characterization of key amino acid substitutions and dynamics of the influenza virus H3N2 hemagglutinin. *Journal of Infection*. 2021. [article]

Bioinformatics Tools

- rsidmap (developer): Rapid mapping of genomic positions to rsid. [link]
- DGAT-onco (developer): Detecting oncogenes by comparing mutational profiles. [link]

Genetics Databases

- MR Catalog (developer): Database for phenotype-wise genetic relationship investigation. [link]
- PON-DEL (developer): Database for predicting the pathogenicity of protein deletions. [link]
- MOCRdb (developer): Multi-omics causal resource database (in development). [link]
- LU-PSB Server (maintainer): Protein variant database of Protein Bioinformatics Group at Lund University. [link]