

CURRICULUM VITAE

Personal

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Work Experience

2022.09 to present **Postdoctoral fellow** (Mentors: Profs. Dong D. Wang and Curtis Huttenhower) at Channing Division of Network Medicine, Brigham and Women's Hospital and Harvard Medical School, Boston, MA, USA.

2021.06-2022.08 **Postdoctoral fellow** (Mentors: Profs. Yan Zheng and Junbo Ge) at Human Phenome Institute, Fudan University, Shanghai, China.

Education

2021.06 **PhD in Genetics** (Supervisor: Prof. Yan Zheng), School of Life Sciences, Fudan University, Shanghai, China.

Dissertation title: A Molecular Epidemiology Study on Diet and Chronic Metabolic Diseases.

2019.10-2020.03 Visiting Student (Supervisor: Prof. Qibin Qi) in the Department of Epidemiology and Population Health, Albert Einstein College of Medicine, New York, USA.

2018.06 **Master of Science** (Supervisor: Prof. Jiucun Wang), School of Life Sciences, Fudan University, Shanghai, China.

2015.06 **Bachelor of Preventive Medicine**, Zhengzhou University, Zhengzhou, China.

Manuscript in Preparation or Submission

[#]Co-first author; ^{*}Co-corresponding author

1. **Zhendong Mei**[#], Fenglei Wang[#], Amrisha Bhosle, Danyue Dong, Raaj Mehta, Andrew Ghazi, Yancong Zhang, Yuxi Liu, Ehud Rinott, Siyuan Ma, Eric B. Rimm, Martha Daviglus, Walter C. Willett, Rob Knight, Frank B. Hu, Qibin Qi, Andrew T. Chan, Robert D. Burk, Meir J. Stampfer, Iris Shai, Robert C. Kaplan, Curtis Huttenhower^{*}, Dong D. Wang^{*}. Gut Microbial Signatures and Strain-Specific Functions in Type 2 Diabetes Revealed by a Cross-Cohort Analysis of 8,117 Metagenomes. *In revision*.
2. Yuxiang Dai[#], **Zhendong Mei**[#], Lili Xu[#], Qingxia Huang[#], Kang Yao[#], Runda Wu, Hongyi Wu, Yijing Lu, Shalaimaiti Shali, Zhen Wang, Lingfeng Luo, Zhonghan Sun, Chenhao Lin, Liang Sun, Juying Qian, Guochong Chen, Huiru Tang, Yan Zheng^{*}, Junbo Ge^{*}. Metabolomic biomarkers featuring severity and prognosis of patients with coronary atherosclerotic disease. *In submission*.
3. Chunchun Yuan[#], Wenhao Qi[#], **Zhendong Mei**[#], Jing Wang[#], Jiangxun Ji[#], Bing Shu, Xiaoyun Wang, Feihong Cai, Chen Huang, Binhao Shi, Haitao Zhang, Wenhao

Zhu, Hongbin Xu, Yue Chen, Yi Shen, Qianqian Liang, Qi Shi, Deizhi Tang*, Yan Zheng*, Yongjun Wang*. An integrative analysis of serum metabolomics and fecal metagenomics revealing a potential gut bone axis and osteoporosis biomarkers: a large elderly Chinese community study. *Under review*.

Publications

First or co-first author:

#Co-first author; *Co-corresponding author

1. Qi W[#], **Mei Z[#]**, Sun Z, Lin C, Lin J, Li J, Ji JS, Zheng Y. Exposure to Multiple Air Pollutants and the Risk of Fractures: A Large Prospective Population-Based Study. *J Bone Miner Res*. 2023 Jun 21. doi: 10.1002/jbmr.4872. Epub ahead of print. PMID: 37341992.
2. **Mei Z**, Yin MT, Sharma A, Wang Z, Peters BA, Chandran A, Weber KM, Ross RD, Gustafson D, Zheng Y, Kaplan RC, Burk RD, Qi Q. Gut microbiota and plasma metabolites associated with bone mineral density in women with or at risk of HIV infection. *AIDS*. 2023 Jan 1;37(1):149-159. doi: 10.1097/QAD.0000000000003400. Epub 2022 Oct 4. PMID: 36205320; PMCID: PMC9742192.
3. Lin C[#], Sun Z[#], **Mei Z[#]**, Zeng H, Zhao M, Hu J, Xia M, Huang T, Wang C, Gao X, Zheng Y. The causal associations of circulating amino acids with blood pressure: a Mendelian randomization study. *BMC Med*. 2022 Oct 28;20(1):414. doi: 10.1186/s12916-022-02612-w. PMID: 36307799; PMCID: PMC9615211.
4. Hu J, Zhao M, Lin C, Sun Z, Chen GC, **Mei Z^{*}**, Zheng Y^{*}. Associations of visceral adipose tissue with bone mineral density and fracture: observational and Mendelian randomization studies. *Nutr Metab (Lond)*. 2022 Jul 12;19(1):45. doi: 10.1186/s12986-022-00680-6. PMID: 35821143; PMCID: PMC9277855.
5. **Mei Z**, Chen GC, Hu J, Lin C, Sun Z, Liu C, Geng X, Yuan C, Qi Q, Zheng Y. Habitual use of fish oil supplements, genetic predisposition, and risk of fractures: a large population-based study. *Am J Clin Nutr*. 2021 Sep 1;114(3):945-954. doi: 10.1093/ajcn/nqab157. PMID: 34038933.
6. Dai Y[#], **Mei Z[#]**, Zhang S[#], Shali S, Ren D, Xu L, Gao W, Chang S, Zheng Y, Qian J, Yao K, Ge J. Sexual Dysfunction and the Impact of Beta-Blockers in Young Males With Coronary Artery Disease. *Front Cardiovasc Med*. 2021 Jul 21;8:708200. doi: 10.3389/fcvm.2021.708200. PMID: 34368259; PMCID: PMC8333273.
7. **Mei Z**, Chen GC, Wang Z, Usyk M, Yu B, Baeza YV, Humphrey G, Benitez RS, Li J, Williams-Nguyen JS, Daviglus ML, Hou L, Cai J, Zheng Y, Knight R, Burk RD, Boerwinkle E, Kaplan RC, Qi Q. Dietary factors, gut microbiota, and serum trimethylamine-N-oxide associated with cardiovascular disease in the Hispanic Community Health Study/Study of Latinos. *Am J Clin Nutr*. 2021 Jun 1;113(6):1503-1514. doi: 10.1093/ajcn/nqab001. PMID: 33709132; PMCID: PMC8168354. (*With editorial*)
8. **Mei Z[#]**, Dong X[#], Qian Y[#], Hong D, Xie Z, Yao G, Qin A, Gao S, Hu J, Liang L, Zheng Y, Su J. Association between the metabolome and bone mineral density in a Chinese population. *EBioMedicine*. 2020 Dec;62:103111. doi: 10.1016/j.ebiom.2020.103111. Epub 2020 Nov 10. PMID: 33186808; PMCID:

PMC7670189.

9. Cao J[#], Zheng Y[#], Luo Z[#], **Mei Z[#]**, Yao Y, Liu Z, Liang C, Yang H, Song Y, Yu K, Gao Y, Zhu C, Huang Z, Qian J, Ge J. Myocardial injury and COVID-19: Serum hs-cTnI level in risk stratification and the prediction of 30-day fatality in COVID-19 patients with no prior cardiovascular disease. *Theranostics*. 2020 Jul 29;10(21):9663-9673. doi: 10.7150/thno.47980. PMID: 32863952; PMCID: PMC7449913.

Editorials:

1. Peipei Gao, **Zhendong Mei***. Food in Brain Health: Does Processing Level Matter? *Neurology*. 2024 (*Accepted*)

Coauthors:

1. Yuan C, Yu XT, Wang J, Shu B, Wang XY, Huang C, Lv X, Peng QQ, Qi WH, Zhang J, Zheng Y, Wang SJ, Liang QQ, Shi Q, Li T, Huang H, **Mei ZD**, Zhang HT, Xu HB, Cui J, Wang H, Zhang H, Shi BH, Sun P, Zhang H, Ma ZL, Feng Y, Chen L, Zeng T, Tang DZ, Wang YJ. Multi-modal molecular determinants of clinically relevant osteoporosis subtypes. *Cell Discov*. 2024 Mar 12;10(1):28. doi: 10.1038/s41421-024-00652-5. PMID: 38472169; PMCID: PMC10933295.
2. Gao P, **Mei Z**, Liu Z, Zhu D, Yuan H, Zhao R, Xu K, Zhang T, Jiang Y, Suo C, Chen X. Association between serum urea concentrations and the risk of colorectal cancer, particularly in individuals with type 2 diabetes: A cohort study. *Int J Cancer*. 2024 Jan 15;154(2):297-306. doi: 10.1002/ijc.34719. Epub 2023 Sep 6. PMID: 37671773.
3. Ma C, Li Y, **Mei Z**, Yuan C, Kang JH, Grodstein F, Ascherio A, Willett WC, Chan AT, Huttenhower C, Stampfer MJ, Wang D. Association Between Bowel-Movement Pattern and Cognitive Function: Prospective Cohort Study and a Metagenomic Analysis of the Gut Microbiome. *Neurology*. 2023 Sep 29;10.1212/WNL.0000000000207849. doi: 10.1212/WNL.0000000000207849. Epub ahead of print. PMID: 37775319.
4. Dong W, Ma L, Huang Q, Yang X, **Mei Z**, Kong M, Sun Z, Zhang Z, Li J, Zou J, Chen D, Dai Y, Zhou D, Zheng Y, Kang L. Gut microbiome alterations in pulmonary hypertension in highlanders and lowlanders. *ERJ Open Res*. 2023 Jun 26;9(3):00617-2022. doi: 10.1183/23120541.00617-2022. PMID: 37377650; PMCID: PMC10291306.
5. Sun Z, Song ZG, Liu C, Tan S, Lin S, Zhu J, Dai FH, Gao J, She JL, **Mei Z**, Lou T, Zheng JJ, Liu Y, He J, Zheng Y, Ding C, Qian F, Zheng Y, Chen YM. Gut microbiome alterations and gut barrier dysfunction are associated with host immune homeostasis in COVID-19 patients. *BMC Med*. 2022 Jan 20;20(1):24. doi: 10.1186/s12916-021-02212-0. PMID: 35045853; PMCID: PMC8769945.
6. Liu C, Sun Z, Shali S, **Mei Z**, Chang S, Mo H, Xu L, Pu Y, Guan H, Chen GC, Qi Q, Quan Z, Qi J, Yao K, Dai Y, Zheng Y, Ge J. The gut microbiome and microbial metabolites in acute myocardial infarction. *J Genet Genomics*. 2022 Jun;49(6):569-578. doi: 10.1016/j.jgg.2021.12.007. Epub 2021 Dec 30. PMID: 34974193.
7. Guan H, Pu Y, Liu C, Lou T, Tan S, Kong M, Sun Z, **Mei Z**, Qi Q, Quan Z, Zhao G,

- Zheng Y. Comparison of Fecal Collection Methods on Variation in Gut Metagenomics and Untargeted Metabolomics. *mSphere*. 2021 Oct 27;6(5):e0063621. doi: 10.1128/mSphere.00636-21. Epub 2021 Sep 15. PMID: 34523982; PMCID: PMC8550109.
8. Mo H, Ye F, Chen D, Wang Q, Liu R, Zhang P, Xu Y, Cheng X, **Mei Z**, Zheng Y, Dai Y, Jiang S, Ge J. A Predictive Model Based on a New CI-AKI Definition to Predict Contrast Induced Nephropathy in Patients With Coronary Artery Disease With Relatively Normal Renal Function. *Front Cardiovasc Med*. 2021 Oct 28;8:762576. doi: 10.3389/fcvm.2021.762576. PMID: 34778413; PMCID: PMC8581221.
 9. Chen GC, Arthur R, Qin LQ, Chen LH, **Mei Z**, Zheng Y, Li Y, Wang T, Rohan TE, Qi Q. Association of Oily and Nonoily Fish Consumption and Fish Oil Supplements With Incident Type 2 Diabetes: A Large Population-Based Prospective Study. *Diabetes Care*. 2021 Mar;44(3):672-680. doi: 10.2337/dc20-2328. Epub 2021 Jan 11. PMID: 33431419; PMCID: PMC7896269.
 10. Zheng Y, Huang T, Wang T, **Mei Z**, Sun Z, Zhang T, Ellervik C, Chai JF, Sim X, van Dam RM, Tai ES, Koh WP, Dorajoo R, Saw SM, Sabanayagam C, Wong TY, Gupta P, Rossing P, Ahluwalia TS, Vinding RK, Bisgaard H, Bønnelykke K, Wang Y, Graff M, Voortman T, van Rooij FJA, Hofman A, van Heemst D, Noordam R, Estampador AC, Varga TV, Enzenbach C, Scholz M, Thiery J, Burkhardt R, Orholm-Melander M, Schulz CA, Ericson U, Sonestedt E, Kubo M, Akiyama M, Zhou A, Kilpeläinen TO, Hansen T, Kleber ME, Delgado G, McCarthy M, Lemaitre RN, Felix JF, Jaddoe VWV, Wu Y, Mohlke KL, Lehtimäki T, Wang CA, Pennell CE, Schunkert H, Kessler T, Zeng L, Willenborg C, Peters A, Lieb W, Grote V, Rzehak P, Koletzko B, Erdmann J, Munz M, Wu T, He M, Yu C, Lecoeur C, Froguel P, Corella D, Moreno LA, Lai CQ, Pitkänen N, Boreham CA, Ridker PM, Rosendaal FR, de Mutsert R, Power C, Paternoster L, Sørensen TIA, Tjønneland A, Overvad K, Djousse L, Rivadeneira F, Lee NR, Raitakari OT, Kähönen M, Viikari J, Langhendries JP, Escribano J, Verduci E, Dedoussis G, König I, Balkau B, Coltell O, Dallongeville J, Meirhaeghe A, Amouyel P, Gottrand F, Pakkala K, Niinikoski H, Hyppönen E, März W, Mackey DA, Gruszfeld D, Tucker KL, Fumeron F, Estruch R, Ordoñas JM, Arnett DK, Mook-Kanamori DO, Mozaffarian D, Psaty BM, North KE, Chasman DI, Qi L. Mendelian randomization analysis does not support causal associations of birth weight with hypertension risk and blood pressure in adulthood. *Eur J Epidemiol*. 2020 Jul;35(7):685-697. doi: 10.1007/s10654-020-00638-z. Epub 2020 May 7. PMID: 32383070; PMCID: PMC7867117.
 11. Dai Y, Tian Q, Si J, Sun Z, Shali S, Xu L, Ren D, Chang S, Dong X, Zhao H, **Mei Z**, Zheng Y, Ge J. Circulating metabolites from the choline pathway and acute coronary syndromes in a Chinese case-control study. *Nutr Metab (Lond)*. 2020 May 24;17:39. doi: 10.1186/s12986-020-00460-0. PMID: 32489394; PMCID: PMC7245747.
 12. Zhang H, Wan W, Liu J, Dai S, Zou Y, Qian Q, Ding Y, Xu X, Ji H, He H, Zhu Q, Yang C, Ye S, Jiang L, Tang J, Tong Q, He D, Zhao D, Li Y, Ma Y, Zhou J, **Mei Z**, Chen X, Yuan Z, Zhang J, Wang X, Yang Y, Jin L, Gao Y, Zhou X, Reveille JD, Zou

- H, Wang J. Smoking quantity determines disease activity and function in Chinese patients with ankylosing spondylitis. Clin Rheumatol. 2018 Jun;37(6):1605-1616. doi: 10.1007/s10067-018-4016-3. Epub 2018 Mar 27. PMID: 29589132.
13. Zhang H, Liu J, Dong Z, Ding Y, Qian Q, Zhou J, Ma Y, **Mei Z**, Chen X, Li Y, Yuan Z, Zhang J, Yang Y, Chen X, Jin L, Zou H, Wang X, Wang J. Elevated serum urate is a potential factor in reduction of total bilirubin: a Mendelian randomization study. Oncotarget. 2017 Oct 24;8(61):103864-103873. doi: 10.18632/oncotarget.21977. PMID: 29262606; PMCID: PMC5732772.

Awards and Honors

2022 The Fellowship of China Postdoctoral Science Foundation
2021 Shanghai Post-doctoral Excellence Program
2021 Outstanding Graduate of Fudan University
2019 Fudan University Exchange Program Scholarship for Doctoral Students
2015 Outstanding Graduates in Henan Province, China
2014 Merit Students in Henan Province, China
2013 Merit Students at Zhengzhou University
2012 Outstanding Student Leaders at Zhengzhou University

Peer Review

Neurology, Food&Function, Nutrition Journal, Frontiers in Microbiology, Frontiers in Nutrition, Frontiers in Cellular and Infection Microbiology, Frontiers in Endocrinology, PLoS One, International Journal of Food Sciences and Nutrition, BMC Public Health