

CURRICULUM VITAE
BING YU, PHD, FAHA

PRESENT TITLE: Professor

ADDRESS: Department of Epidemiology, School of Public Health (SPH)
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ACADEMIC POSITIONS:

2024- *Professor*
Department of Epidemiology, UTHealth Houston SPH, Houston, TX

2023-present *Co-Director*
Human Genetics Center, UTHealth Houston SPH, Houston, TX

2021-present *JLH Foundation Chair in Transplant Prevention*
UTHealth Houston SPH, Houston, TX

2019-2024 *Associate Professor with tenure*
Department of Epidemiology, Human Genetics and Environmental Sciences
(EHGES), UTHealth Houston SPH, Houston, TX

2015-2019 *Tenure-track Assistant Professor*
EHGES, UTHealth Houston SPH, Houston, TX

2013-2015 *Postdoctoral fellow*
Human Genetics Center, UTHealth Houston SPH, Houston, TX

EDUCATION:

2013 Ph.D. Epidemiology, UTHealth Houston, Houston, TX, US

2008 M.S. Biostatistics, Fudan University, Shanghai, China

2003 B.M. Preventive Medicine, Fudan University, Shanghai, China

HONORS AND AWARDS:

2019 Fellow of the American Heart Association

2017 Research Mentor/Mentee Award, UTHealth Houston SPH

2014 Early Career Award
Cohorts of Heart and Aging Genomic Epidemiology (CHARGE) Consortium

2014 Charles J. Epstein Trainee Award for Excellence in Human Genetics Research
(Finalist) - American Society of Human Genetics (ASHG)

2013 The Jeremiah and Rose Stamler Research Award for New Investigators
American Heart Association (AHA)

2012 Rufus K. Guthrie Scholarship, UTHealth Houston SPH

2011-2013 Fellowship from the Houston Laboratory and Population Science
Training Program in Gene and Environment Interaction

RESEARCH:

Peer Reviewed Publications (trainee papers under Dr. Yu's direct supervision are underscored):

1. Ramonfaur D, Buckley LF, Arthur V, Yang Y, Claggett BL, Ndumele CE, Walker KA, Austin T, Odden MC, Floyd JS, Sanders-van Wijk S, Njoroge J, Kizer JR, Kitzman D, Konety SH, Schrack J, Liu F, Windham BG, Palta P, Coresh J, **Yu B**, Shah AM. High Throughput Plasma Proteomics and Risk of Heart Failure and Frailty in Late Life. *JAMA Cardiol.* 2024 Jul 1;9(7):649-658. PubMed PMID: 38809565.
2. Saadatagah S, Naderian M, Uddin M, Dikilitas O, Niroula A, Schuermans A, Selvin E, Hoogeveen RC, Matsushita K, Nambi V, **Yu B**, Chen LY, Bick AG, Ebert BL, Honigberg MC, Li N, Shah A, Natarajan P, Kullo IJ, Ballantyne CM. Atrial Fibrillation and Clonal Hematopoiesis in TET2 and ASXL1. *JAMA Cardiol.* 2024 Jun 1;9(6):497-506. PubMed PMID: 38598228.
3. Luo K, Taryn A, Moon EH, Peters BA, Solomon SD, Daviglius ML, Kansal MM, Thyagarajan B, Gellman MD, Cai J, Burk RD, Knight R, Kaplan RC, Cheng S, Rodriguez CJ, Qi Q, **Yu B**. Gut microbiota, blood metabolites, and left ventricular diastolic dysfunction in US Hispanics/Latinos. *Microbiome.* 2024 May 10;12(1):85. PubMed PMID: 38725043.
4. Alkis T, Luo X, Wall K, Brody J, Bartz T, Chang PP, Norby FL, Hoogeveen RC, Morrison AC, Ballantyne CM, Coresh J, Boerwinkle E, Psaty BM, Shah AM, **Yu B**. A polygenic risk score of atrial fibrillation improves prediction of lifetime risk for heart failure. *ESC Heart Fail.* 2024 Apr;11(2):1086-1096. PubMed PMID: 38258344.
5. Liu G, Nguyen NQH, Wong KE, Agarwal SK, Boerwinkle E, Chang PP, Claggett BL, Loehr LR, Ma J, Matsushita K, Rodriguez CJ, Rossi JS, Russell SD, Stacey RB, Shah AM, **Yu B**. Metabolomic Association and Risk Prediction With Heart Failure in Older Adults. *Circ Heart Fail.* 2024 Mar;17(3):e010896. PubMed PMID: 38426319.
6. Aboelsaad IAF, Claggett BL, Arthur V, Dorbala P, Matsushita K, Lennep BW, **Yu B**, Lutsey PL, Ndumele CE, Farag YMK, Shah AM, Buckley LF. Plasma Ferritin Levels, Incident Heart Failure, and Cardiac Structure and Function: The ARIC Study. *JACC Heart Fail.* 2024 Mar;12(3):539-548. PubMed PMID: 38206230.
7. Shelbaya K, Arthur V, Yang Y, Dorbala P, Buckley L, Claggett B, Skali H, Dufresne L, Yang TY, Engert JC, Thanassoulis G, Floyd J, Austin TR, Bortnick A, Kizer J, Freitas RCC, Singh SA, Aikawa E, Hoogeveen RC, Ballantyne C, **Yu B**, Coresh J, Blaha MJ, Matsushita K, Shah AM. Large-Scale Proteomics Identifies Novel Biomarkers and Circulating Risk Factors for Aortic Stenosis. *J Am Coll Cardiol.* 2024 Feb 6;83(5):577-591. PubMed PMID: 38296402.
8. Shah AM, Myhre PL, Arthur V, Dorbala P, Rasheed H, Buckley LF, Claggett B, Liu G, Ma J, Nguyen NQ, Matsushita K, Ndumele C, Tin A, Hveem K, Jonasson C, Dalen H, Boerwinkle E, Hoogeveen RC, Ballantyne C, Coresh J, Omland T, **Yu B**. Large scale plasma proteomics identifies novel proteins and protein networks associated with heart failure development. *Nat Commun.* 2024 Jan 15;15(1):528. PubMed PMID: 38225249.
9. Li Y, Wong KY, Howard AG, Gordon-Larsen P, Highland HM, Graff M, North KE, Downie CG, Avery CL, **Yu B**, Young KL, Buchanan VL, Kaplan R, Hou L, Joyce BT, Qi Q, Sofer T, Moon JY, Lin DY. Mendelian randomization with incomplete measurements on the exposure in the Hispanic Community Health Study/Study of Latinos. *HGG Adv.* 2024 Jan 11;5(1):100245. PubMed PMID: 37817410.

10. Schuermans A, Honigberg MC, Raffield LM, Yu B, Roberts MB, Kooperberg C, Desai P, Carson AP, Shah AM, Ballantyne CM, Bick AG, Natarajan P, Manson JE, Whitsel EA, Eaton CB, Reiner AP. Clonal Hematopoiesis and Incident Heart Failure With Preserved Ejection Fraction. *JAMA Netw Open*. 2024 Jan 2;7(1):e2353244. PubMed PMID: 38270950.
11. Bey GS, Pike JR, Zannas AS, Xiao Q, **Yu B**, Shah AM, Palta P. The Relationship of Neighborhood Disadvantage, Biological Aging, and Psychosocial Risk and Resilience Factors in Heart Failure Incidence Among Black Persons: A Moderated Mediation Analysis. *J Gerontol B Psychol Sci Soc Sci*. 2024 Jan 1;79(1). PubMed PMID: 37591789.
12. Nogal A, Alkis T, Lee Y, Kifer D, Hu J, Murphy RA, Huang Z, Wang-Sattler R, Kastenmüller G, Linkohr B, Barrios C, Crespo M, Gieger C, Peters A, Price J, Rexrode KM, **Yu B**, Menni C. Predictive metabolites for incident myocardial infarction: a two-step meta-analysis of individual patient data from six cohorts comprising 7897 individuals from the COnsortium of METabolomics Studies. *Cardiovasc Res*. 2023 Dec 30;119(17):2743-2754. PubMed PMID: 37706562.
13. Lau ES, Roshandelpoor A, Zarbafian S, Wang D, Guseh JS, Allen N, Varadarajan V, Nayor M, Shah RV, Lima JAC, Shah SJ, **Yu B**, Alotaibi M, Cheng S, Jain M, Lewis GD, Ho JE. Eicosanoid and eicosanoid-related inflammatory mediators and exercise intolerance in heart failure with preserved ejection fraction. *Nat Commun*. 2023 Nov 20;14(1):7557. PubMed PMID: 37985769.
14. Jia X, Buckley L, Sun C, Al Rifai M, **Yu B**, Nambi V, Virani SS, Selvin E, Matsushita K, Hoogeveen RC, Coresh J, Shah AM, Ballantyne CM. Association of interleukin-6 and interleukin-18 with cardiovascular disease in older adults: Atherosclerosis Risk in Communities study. *Eur J Prev Cardiol*. 2023 Nov 9;30(16):1731-1740. PubMed PMID: 37306504.
15. Buckley LF, Agha AM, Dorbala P, Claggett BL, **Yu B**, Hussain A, Nambi V, Chen LY, Matsushita K, Hoogeveen RC, Ballantyne CM, Shah AM. MMP-2 Associates With Incident Heart Failure and Atrial Fibrillation: The ARIC Study. *Circ Heart Fail*. 2023 Nov;16(11):e010849. PubMed PMID: 37753653.
16. Buckley LF, Dorbala P, Claggett BL, Libby P, Tang W, Coresh J, Ballantyne CM, Hoogeveen RC, **Yu B**, Shah AM. Circulating neutrophil-related proteins associate with incident heart failure and cardiac dysfunction: The ARIC study. *Eur J Heart Fail*. 2023 Nov;25(11):1923-1932. PubMed PMID: 37608611.
17. Giro P, Cunningham JW, Rasmussen-Torvik L, Bielinski SJ, Larson NB, Colangelo LA, Jacobs DR Jr, Gross M, Reiner AP, Lloyd-Jones DM, Guo X, Taylor K, Vaduganathan M, Post WS, Bertoni A, Ballantyne C, Shah A, Claggett B, Boerwinkle E, **Yu B**, Solomon SD, Shah SJ, Patel RB. Missense Genetic Variation of ICAM1 and Incident Heart Failure. *J Card Fail*. 2023 Aug;29(8):1163-1172. PubMed PMID: 36882149.
18. Selvaraj S, Claggett BL, Quarta CC, **Yu B**, Inciardi RM, Buxbaum JN, Mosley TH, Shah AM, Dorbala S, Falk RH, Solomon SD. Age Dependency of Cardiovascular Outcomes With the Amyloidogenic pV142I Transthyretin Variant Among Black Individuals in the US. *JAMA Cardiol*. 2023 Aug 1;8(8):784-788. PubMed PMID: 37212191.
19. Feofanova EV, Brown MR, Alkis T, Manuel AM, Li X, Tahir UA, Li Z, Mendez KM, Kelly RS, Qi Q, Chen H, Larson MG, Lemaitre RN, Morrison AC, Grieser C, Wong KE, Gersztern RE, Zhao Z, Lasky-Su J, **Yu B**. Whole-Genome Sequencing Analysis of Human Metabolome in Multi-Ethnic Populations. *Nat Commun*. 2023 May 30;14(1):3111. PubMed PMID: 37253714.

20. Wong WJ, Emdin C, Bick AG, Zekavat SM, Niroula A, Pirruccello JP, Dichtel L, Griffin G, Uddin MM, Gibson CJ, Kovalcik V, Lin AE, McConkey ME, Vromman A, Sellar RS, Kim PG, Agrawal M, Weinstock J, Long MT, **Yu B**, Banerjee R, Nicholls RC, Dennis A, Kelly M, Loh PR, McCarroll S, Boerwinkle E, Vasani RS, Jaiswal S, Johnson AD, Chung RT, Corey K, Levy D, Ballantyne C, Ebert BL, Natarajan P. Clonal haematopoiesis and risk of chronic liver disease. *Nature*. 2023 Apr;616(7958):747-754. PubMed PMID: 37046084; PubMed Central PMCID: PMC10405350.
21. Kurniansyah N, Wallace DA, Zhang Y, **Yu B**, Cade B, Wang H, Ochs-Balcom HM, Reiner AP, Ramos AR, Smith JD, Cai J, Daviglius M, Zee PC, Kaplan R, Kooperberg C, Rich SS, Rotter JI, Gharib SA, Redline S, Sofer T. An integrated multi-omics analysis of sleep-disordered breathing traits implicates P2XR4 purinergic signaling. *Commun Biol*. 2023 Jan 31;6(1):125. PubMed PMID: 36721044.
22. Zhang Y, Ngo D, **Yu B**, Shah NA, Chen H, Ramos AR, Zee PC, Tracy R, Durda P, Kaplan R, Daviglius ML, Rich SS, Rotter JI, Cai J, Clish C, Gerszten R, Kristal BS, Gharib SA, Redline S, Sofer T. Development and validation of a metabolite index for obstructive sleep apnea across race/ethnicities. *Sci Rep*. 2022 Dec 16;12(1):21805. PubMed PMID: 36526671.
23. Liu G, Moore K, Su WC, Delclos GL, Gimeno Ruiz de Porras D, **Yu B**, Tian H, Luo B, Lin S, Lewis GT, Craft E, Zhang K. Chemical explosion, COVID-19, and environmental justice: Insights from low-cost air quality sensors. *Sci Total Environ*. 2022 Aug 6;849:157881. PubMed PMID: 35944636.
24. Kim W, Hecker J, Barr RG, Boerwinkle E, Cade B, Correa A, Dupuis J, Gharib SA, Lange L, London SJ, Morrison AC, O'Connor GT, Oelsner EC, Psaty BM, Vasani RS, Redline S, Rich SS, Rotter JI, **Yu B**, Lange C, Manichaikul A, Zhou JJ, Sofer T, Silverman EK, Qiao D, Cho MH. Assessing the contribution of rare genetic variants to phenotypes of chronic obstructive pulmonary disease using whole-genome sequence data. *Hum Mol Genet*. 2022 Nov 10;31(22):3873-3885. PubMed PMID: 35766891
25. Zhou L, Surapaneni A, Rhee EP, **Yu B**, Boerwinkle E, Coresh J, Grams ME, Schlosser P. Integrated proteomic and metabolomic modules identified as biomarkers of mortality in the Atherosclerosis Risk in Communities study and the African American Study of Kidney Disease and Hypertension. *Hum Genomics*. 2022 Nov 3;16(1):53. PubMed PMID: 36329547.
26. Panyard DJ, **Yu B**, Snyder MP. The metabolomics of human aging: Advances, challenges, and opportunities. *Sci Adv*. 2022 Oct 21;8(42):eadd6155. PubMed PMID: 36260671.
27. Uddin MDM, Nguyen NQH, **Yu B**, Brody JA, Pampana A, Nakao T, Fornage M, Bressler J, Sotoodehnia N, Weinstock JS, Honigberg MC, Nachun D, Bhattacharya R, Griffin GK, Chander V, Gibbs RA, Rotter JI, Liu C, Baccarelli AA, Chasman DI, Whitsel EA, Kiel DP, Murabito JM, Boerwinkle E, Ebert BL, Jaiswal S, Floyd JS, Bick AG, Ballantyne CM, Psaty BM, Natarajan P, Conneely KN. Clonal hematopoiesis of indeterminate potential, DNA methylation, and risk for coronary artery disease. *Nat Commun*. 2022 Sep 12;13(1):5350. PubMed PMID: 36097025
28. Louca P, Nogal A, Moskal A, Goulding NJ, [...], **Yu B**, Gunter MJ, Suhre K, Lawlor DA, Mangino M, Menni C. Cross-Sectional Blood Metabolite Markers of Hypertension: A Multicohort Analysis of 44,306 Individuals from the Consortium of METabolomics Studies. *Metabolites*. 2022 Jun 28;12(7). PubMed PMID: 35888725.
29. Qi Q*, Li J*, **Yu B***, Moon JY, [...], Knight R, Burk RD, Boerwinkle E, Kaplan RC. Host and gut microbial tryptophan metabolism and type 2 diabetes: an integrative analysis of host

- genetics, diet, gut microbiome and circulating metabolites in cohort studies. *Gut*. 2022 Jun;71(6):1095-1105. PubMed PMID: 34127525 (* contributed equally).
30. Hu X, Qiao D, Kim W, Moll M, [...], **Yu B**, [...], Wheeler HE, Cho MH, Im HK, Manichaikul A. Polygenic transcriptome risk scores for COPD and lung function improve cross-ethnic portability of prediction in the NHLBI TOPMed program. *Am J Hum Genet*. 2022 May 5;109(5):857-870. PubMed PMID: 35385699.
 31. Zhang J, Dutta D, Köttgen A, Tin A, Schlosser P, Grams ME, Harvey B, **Yu B**, Boerwinkle E, Coresh J, Chatterjee N. Plasma proteome analyses in individuals of European and African ancestry identify cis-pQTLs and models for proteome-wide association studies. *Nat Genet*. 2022 May;54(5):593-602. PubMed PMID: 35501419.
 32. Banerjee P, Olmsted-Davis EA, Deswal A, Nguyen MT, Koutroumpakis E, Palaskas NL, Lin SH, Kotla S, Reyes-Gibby C, Yeung SJ, Yusuf SW, Yoshimoto M, Kobayashi M, **Yu B**, Schadler K, Herrmann J, Cooke JP, Jain A, Chini E, Le NT, Abe JI. Cancer treatment-induced NAD⁺ depletion in premature senescence and late cardiovascular complications. *J Cardiovasc Aging*. 2022;2. PubMed PMID: 35801078.
 33. Lee Y, Chen H, Chen W, Qi Q, Afshar M, Cai J, Daviglius ML, Thyagarajan B, North KE, London SJ, Boerwinkle E, Celedón JC, Kaplan RC, **Yu B**. Metabolomic Associations of Asthma in the Hispanic Community Health Study/Study of Latinos. *Metabolites*. 2022 Apr 16;12(4). PubMed PMID: 35448546.
 34. Bhattacharya R, Zekavat SM, Haessler J, Fornage M, Raffield L, Uddin MM, Bick AG, Niroula A, **Yu B**, Gibson C, Griffin G, Morrison AC, Psaty BM, Longstreth WT, Bis JC, Rich SS, Rotter JI, Tracy RP, Correa A, Seshadri S, Johnson A, Collins JM, Hayden KM, Madsen TE, Ballantyne CM, Jaiswal S, Ebert BL, Kooperberg C, Manson JE, Whitsel EA, Natarajan P, Reiner AP. Clonal Hematopoiesis Is Associated With Higher Risk of Stroke. *Stroke*. 2022 Mar;53(3):788-797. PubMed PMID: 34743536; PubMed Central PMCID: PMC8885769.
 35. Frenzel S, Bis JC, Gudmundsson EF, O'Donnell A, [...], **Yu B**, [...], Psaty BM, Wolters FJ, Grabe HJ, Seshadri S. Associations of Pulmonary Function with MRI Brain Volumes: A Coordinated Multi-Study Analysis. *J Alzheimers Dis*. 2022;90(3):1073-1083. PubMed PMID: 36213999; PubMed Central PMCID: PMC9712227.
 36. Lumbers RT, Shah S, Lin H, Czuba T, [...], **Yu B**, [...], Cappola TP, Ellinor PT, Vasan RS, Smith JG. The genomics of heart failure: design and rationale of the HERMES consortium. *ESC Heart Fail*. 2021 Dec;8(6):5531-5541. PubMed PMID: 34480422.
 37. Yang Y, Bartz TM, Brown MR, Guo X, [...], Boerwinkle E, Fornage M, Jun G, **Yu B**. Identification of Functional Genetic Determinants of Cardiac Troponin T and I in a Multiethnic Population and Causal Associations With Atrial Fibrillation. *Circ Genom Precis Med*. 2021 Dec;14(6):e003460. PubMed PMID: 34732054.
 38. Luo S, Feofanova EV, Tin A, Tung S, Rhee EP, Coresh J, Arking DE, Surapaneni A, Schlosser P, Li Y, Köttgen A, **Yu B**, Grams ME. Genome-wide association study of serum metabolites in the African American Study of Kidney Disease and Hypertension. *Kidney Int*. 2021 Aug;100(2):430-439. PubMed PMID: 33838163.
 39. **Yu B**, Roberts MB, Raffield LM, Zekavat SM, Nguyen NQH, Biggs ML, Brown MR, Griffin G, Desai P, Correa A, Morrison AC, Shah AM, Niroula A, Uddin MM, Honigberg MC, Ebert BL, Psaty BM, Whitsel EA, Manson JE, Kooperberg C, Bick AG, Ballantyne CM, Reiner AP, Natarajan P, Eaton CB; National Heart, Lung, and Blood Institute TOPMed Consortium. Supplemental Association of Clonal Hematopoiesis With Incident Heart Failure. *J Am Coll Cardiol*. 2021 Jul 6;78(1):42-52. PubMed PMID: 34210413.

40. Mei Z, Chen GC, Wang Z, Usyk M, **Yu B**, Baeza YV, Humphrey G, Benitez RS, Li J, Williams-Nguyen JS, Daviglius 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. PubMed PMID: 33709132.
41. Hussain A, Tang O, Sun C, Jia X, Selvin E, Nambi V, Folsom A, Heiss G, Zannad F, Mosley T, Virani SS, Coresh J, Boerwinkle E, **Yu B**, Cunningham JW, Shah AM, Solomon SD, de Lemos JA, Hoogeveen RC, Ballantyne CM. Soluble Angiotensin-Converting Enzyme 2, Cardiac Biomarkers, Structure, and Function, and Cardiovascular Events (from the Atherosclerosis Risk in Communities Study). *Am J Cardiol*. 2021 May 1;146:15-21. PubMed PMID: 33539861.
42. Xu J, Liu G, Hegde SM, Palta P, Boerwinkle E, Gabriel KP, **Yu B**. Physical Activity-Related Metabolites Are Associated with Mortality: Findings from the Atherosclerosis Risk in Communities (ARIC) Study. *Metabolites*. 2021 Jan 19;11(1). PubMed PMID: 33477977.
43. Kim H, Hu EA, E Wong K, **Yu B**, Steffen LM, Seidemann SB, Boerwinkle E, Coresh J, Rebholz CM. Serum Metabolites Associated with Healthy Diets in African Americans and European Americans. *J Nutr*. 2021 Jan 4;151(1):40-49. PubMed PMID: 33244610.
44. Luo S, Surapaneni A, Zheng Z, Rhee EP, Coresh J, Hung AM, Nadkarni GN, **Yu B**, Boerwinkle E, Tin A, Arking DE, Steinbrenner I, Schlosser P, Kottgen A, Grams ME. NAT8 Variants, N-Acetylated Amino Acids, and Progression of CKD. *Clin J Am Soc Nephrol*. 2020 Dec 31;16(1):37-47. PubMed PMID: 33380473.
45. Jia X, Sun C, Tang O, Gorlov I, Nambi V, Virani SS, Villareal DT, Taffet GE, **Yu B**, Bressler J, Boerwinkle E, Windham BG, de Lemos JA, Matsushita K, Selvin E, Michos ED, Hoogeveen RC, Ballantyne CM. Plasma dehydroepiandrosterone sulfate and cardiovascular disease risk in older men and women. *J Clin Endocrinol Metab*. 2020 Dec 1;105(12):e4304-e4327. PubMed PMID: 32785663.
46. Surendran P, Feofanova EV, Lahrouchi N, Ntalla I, [..], **Yu B**, [...], Levy D, Newton-Cheh C, Munroe PB, Howson JMM. Discovery of rare variants associated with blood pressure regulation through meta-analysis of 1.3 million individuals. *Nat Genet*. 2020 Dec;52(12):1314-1332. PubMed PMID: 33230300.
47. Feofanova EV, Chen H, Dai Y, Jia P, Grove ML, Morrison AC, Qi Q, Daviglius M, Cai J, North KE, Laurie CC, Kaplan RC, Boerwinkle E, **Yu B**. A Genome-wide Association Study Discovers 46 Loci of the Human Metabolome in the Hispanic Community Health Study/Study of Latinos. *Am J Hum Genet*. 2020 Nov 5;107(5):849-863. PubMed PMID: 33031748.
48. Menni C, Zhu J, Le Roy CI, Mompeo O, Young K, Rebholz CM, Selvin E, North KE, Mohny RP, Bell JT, Boerwinkle E, Spector TD, Mangino M, **Yu B**, Valdes AM. Serum metabolites reflecting gut microbiome alpha diversity predict type 2 diabetes. *Gut Microbes*. 2020 Nov 1;11(6):1632-1642. PubMed PMID: 32576065.
49. Zhao X, Qiao D, Yang C, Kasela S, [...], **Yu B**, [...], Silverman EK, Barr RG, Cho MH, Manichaikul A. Whole genome sequence analysis of pulmonary function and COPD in 19,996 multi-ethnic participants. *Nat Commun*. 2020 Oct 14;11(1):5182. PubMed PMID: 33057025.
50. Murthy VL*, **Yu B***, Wang W, Zhang X, Alkis T, Pico AR, Yeri A, Bhupathiraju SN, Bressler J, Ballantyne CM, Freedman JE, Ordovas J, Boerwinkle E, Tucker KL, Shah R. Molecular Signature of Multisystem Cardiometabolic Stress and Its Association With Prognosis. *JAMA Cardiol*. 2020 Oct 1;5(10):1144-1153. PubMed PMID: 32717046. (* contributed equally)

51. Chen GC, Chai JC, **Yu B**, Michelotti GA, Grove ML, Fretts AM, Daviglius ML, Garcia-Bedoya OL, Thyagarajan B, Schneiderman N, Cai J, Kaplan RC, Boerwinkle E, Qi Q. Serum sphingolipids and incident diabetes in a US population with high diabetes burden: the Hispanic Community Health Study/Study of Latinos (HCHS/SOL). *Am J Clin Nutr.* 2020;112(1):57-65.
52. Sekula P, Tin A, Schultheiss UT, Baid-Agrawal S, Mohny RP, Steinbrenner I, **Yu B**, Luo S, Boerwinkle E, Eckardt KU, Coresh J, Grams ME, Köttgen A. Urine 6-Bromotryptophan: Associations with Genetic Variants and Incident End-Stage Kidney Disease. *Sci Rep.* 2020;10(1):10018.
53. Li C, Mou C, Swartz MD, **Yu B**, Bai Y, Tu Y, Liu X. dbMTS: A comprehensive database of putative human microRNA target site SNVs and their functional predictions. *Hum Mutat.* 2020; 41(6):1123-1130.
54. de Las Fuentes L, Sung YJ, Noordam R, Winkler T, [...], **Yu B**, [...], Munroe PB, Franks PW, Rao DC, Fornage M. Gene-educational attainment interactions in a multi-ancestry genome-wide meta-analysis identify novel blood pressure loci. *Mol Psychiatry.* 2020 [Epub ahead of print] PubMed PMID: 32372009.
55. Shah S, Henry A, Roselli C, Lin H, Sveinbjörnsson G, [...], **Yu B**, [...], Stefansson K, Smith JG, Vasani RS, Swerdlow DI, Lumbers RT. Genome-wide association and Mendelian randomisation analysis provide insights into the pathogenesis of heart failure. *Nat Commun.* 2020; 11(1):163.
56. Gigliotti JC, Tin A, Pourafshar S, Cechova S, Wang YT, Sung SJ, Bodonyi-Kovacs G, Cross JV, Yang G, Nguyen N, Chan F, Rebholz C, **Yu B**, Grove ML, Grams ME, Köttgen A, Scharpf R, Ruiz P, Boerwinkle E, Coresh J, Le TH. *GSTM1* Deletion Exaggerates Kidney Injury in Experimental Mouse Models and Confers the Protective Effect of Cruciferous Vegetables in Mice and Humans. *J Am Soc Nephrol.* 2020; 31(1):102-116.
57. Yee SW, Stecula A, Chien HC, Zou L, Feofanova EV, van Borselen M, Cheung KWK, Yousri NA, Suhre K, Kinchen JM, Boerwinkle E, Irannejad R, **Yu B**, Giacomini KM. Unraveling the functional role of the orphan solute carrier, *SLC22A24* in the transport of steroid conjugates through metabolomic and genome-wide association studies. *PLoS Genet.* 2019; 15(9):e1008208.
58. Evangelou E, Gao H, Chu C, Ntritsos G, Blakeley P, Butts, [...], **Yu B**, [...], Matthews PM, Rothenfluh A, Desrivieres S, Schumann G, Elliott P. New alcohol-related genes suggest shared genetic mechanisms with neuropsychiatric disorders. *Nat Hum Behav.* 2019; 3(9):950-961.
59. Tin A*, **Yu B***, Ma J, Masushita K, Daya N, Hoogeveen RC, Ballantyne CM, Couper D, Rebholz CM, Grams ME, Alonso A, Mosley T, Heiss G, Ganz P, Selvin E, Boerwinkle E, Coresh J. Reproducibility and Variability of Protein Analytes Measured Using a Multiplexed Modified Aptamer Assay. *J Appl Lab Med.* 2019; 4(1):30-39. (*contributed equally)
60. Wang Z, Zhu C, Nambi V, Morrison AC, Folsom AR, Ballantyne CM, Boerwinkle E, **Yu B**. Metabolomic Pattern Predicts Incident Coronary Heart Disease. *Arterioscler Thromb Vasc Biol.* 2019, 39(7):1475-1482.
61. Alonso A, **Yu B**, Sun YV, Chen LY, Arking DE, Loehr LR, O'Neal WT, Soliman EZ, Boerwinkle E. Serum metabolomics and incidence of atrial fibrillation: the Atherosclerosis Risk in Communities (ARIC) Study. *Am J Cardiol.* 2019; 123(12):1955-1961.
62. de Vries PS, Brown MR, Bentley AR, Sung YJ, Winkler TW, [...], **Yu B**, [...], Rice K, Chasman DI, Cupples LA, Rao DC, Morrison AC. Multiancestry Genome-Wide Association

- Study of Lipid Levels Incorporating Gene-Alcohol Interactions. *Am J Epidemiol.* 2019; 188(6):1033-1054.
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103. Grove ML, **Yu B**, Cochran BJ, Haritunians T, Bis JC, Taylor KD, Hansen M, Borecki IB, Cupples LA, Fornage M, Gudnason V, Harris TB, Kathiresan S, Kraaij R, Launer LJ, Levy D, Liu Y, Mosley T, Peloso GM, Psaty BM, Rich SS, Rivadeneira F, Siscovick DS, Smith AV, Uitterlinden A, van Duijn CM, Wilson JG, O'Donnell CJ, Rotter JI, Boerwinkle E. Best practices and joint calling of the HumanExome BeadChip: the CHARGE Consortium. *PLoS one*. 2013; 8(7):e68095.
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105. Wu JH, **Yu B**. The Epidemiological Research Progress of Impaired Glucose Tolerance. *Chinese Journal of Prevention & Control in Chronic Disease*, 2007, 15: (1) 76-77
106. **Yu B**, Lu HM, Wang Y. A time-series study on the association of daily mortality and air pollution in Luwan district, Shanghai. *Shanghai Journal of Preventive Medicine*. 2006, 18: (6) 264-266
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108. Liu HY, Xu HH, Wu JH, Sheng DY, Liu H, **Yu B**, Yao ZP, Lu HM. A survey of the nutritional status of the diet of the elderly from the apartment for the elderly in Luwan district Shanghai. *Shanghai Journal of Preventive Medicine*. 2003, 15: (11)

Non-peer Reviewed Book Chapter:

109. Wang Z, **Yu B**. Biomarkers in Cardiovascular Disease (Chapter 16: Metabolomics, proteomics and genomics: an introduction to a clinician. Biomarkers in Cardiovascular Disease). Elsevier. 2018. (ISBN: 9780323548359)

Active Grant Awards (with role as PI or MPI):

R01HL141824 (Yu) 04/2018 - 03/2025 (NCE)
Metabolic Signatures Underlying Cardiac Function for Heart Failure in Multi-Ethnic Populations

The goal of this project is to use multi-omics technologies to identify novel genetic determinants and metabolic signatures associated with cardiac dysfunction and heart failure risk.

Role: PI

R01HL148218 (Shah/Yu) 07/2020 - 06/2025 (NCE)
Proteomic Signatures to Identify Pathways Underlying the Progression to Heart Failure

The goal of this application is to define the contributions of inflammatory pathways and identify novel causal pathways for the development of cardiac dysfunction and heart failure in the elderly.

Role: MPI

R01HL160793 (Yu/Ramachandran) 08/2022 – 06/2026
Genetic Architecture of Cardiac Structure and Function and Its Implication in Heart Failure

The goal of this project is to identify specific genomic variants, captured by whole genome sequencing, associated with cardiac structure and function, as well as heart failure.

Role: MPI (contact)

R01HL163857 (Abe/Cooke/Le/Yu) 09/2022 – 08/2026
Premature aging disorders, metabolites, and atherosclerosis

The major goal of this project is to investigate the mechanisms underlying vascular dysfunction and early atherosclerosis in the premature aging.

Role: MPI

R01HL168683 (Yu) 04/2023 – 03/2027
Molecular Determinants of Atherosclerotic Cardiovascular Disease in Multi-ethnic Populations

The major goal of this project is to identify circulating metabolite and its longitudinal change, along with the genetic determinants, contributing to atherosclerosis and ASCVD.

Role: PI

R01HL160793-S1(Yu/Ramachandran) 09/2023 –06/2027 (NCE)
Development of a cloud-based analytical tool for polygenic risk score and its implication in heart failure research

The major goal of this project is to develop a cloud-base tool for polygenic risk score construction and implement it in heart failure research.

Role: MPI (contact)

Completed Grant Awards (with role as PI):

R01HL142003 05/2018 - 04/2022
Trans-omics Analysis to Unravel Molecular Underpinnings of Heart, Lung and Blood Disease Risk Factors

The goal of this application is to identify genetic variants that influence circulating metabolites (metabQTL) in multi-ethnic populations and utilize metabQTL findings to identify molecular pathways that regulate heart, lung and blood disease risk factors.

Role: PI

AHA17SDG33661228

07/2017 – 06/2020

The Application of Genomics and Metabolomics on Coronary Heart Disease Risk Prediction

The objective of the proposed research is to integrate multi-omics data to better understand the role of the metabolome in relation to coronary heart disease.

Role: PI

UTHealth Houston SPH PRIME Award

09/2016 - 08/2017

Genetic and Metabolomic Determinants of HDL Influence Coronary Heart Disease Risk

The goal of this project is to support Dr. Yu to conduct pilot study on genetics, metabolomics and lipids.

Role: PI

INVITED TALKS:

1. Metabolomics Harmonization and Practical Recommendation in the TOPMed Program. The Boston University and Framingham Heart Study (BU-FHS) seminar. Online, Feb 2024.
2. Utilization of molecular traits in heart failure research: opportunities and challenges. Johns Hopkins Bloomberg School of Public Health Welch Center Grand Rounds. Online, May 2023.
3. Understanding the molecular mechanisms of heart failure: challenges and opportunities. Tulane University Translational Science Grand Rounds. Dec 2022.
4. Advancing epidemiology studies through omics measures: an exemplar from the Atherosclerosis Risk in Communities (ARIC) Study. Study to Explore Early Development (SEED): Genomic Priorities Workshop. Online, May 2022.
5. Multi-Omics Approaches to Study the Etiology of Cardiometabolic Diseases. UTHealth Center for Precision Health seminar. Online, November 2021.
6. Metabolomics and Human Disease. The 17th Annual Conference for the Metabolomics Society. Online, June 2021.
7. Overview of the Consortium of Metabolomics Studies (COMETS). The NHGRI Genome Sequencing Program (GSP) Workshop. Online, March 2021.
8. Multi-Ethnic Whole-Genome Sequencing Analysis of Human Metabolome from Trans-Omics for Precision Medicine (TOPMed) Program Identifies Novel Genetic Loci. The Framingham Heart Study - OMICS Conference Series (FOCuS) seminar. Online, March 2021.
9. Genetics, Metabolomics and Coronary Heart Disease. Metabolomics Association of North America (MANA). Online, September 2020.
10. Genetics, Metabolomics and Coronary Heart Disease. Statistical Genetics Seminar, School of Public Health, Boston University. Boston, MA, April 2020.
11. Genetics, Metabolomics and Coronary Heart Disease. Cardiovascular Research Seminar, Beth Israel Deaconess Medical Center. Boston, MA, April 2020.
12. Genetics, Metabolomics and Cardiovascular Disease. James T. Willerson MD Cardiovascular Seminars. Texas Heart Institute. Houston, TX, February 2020.

13. Structural Variation and Metabolomics. CHARGE Conference. Houston, TX, January 2020.
14. Genetics, Metabolomics and Coronary Heart Disease. iBright Annual Conference. MD Anderson Cancer Center. Houston, TX, November 2019.
15. Genetics and Metabolomics. GSP-TOPMed Program Workshop. Ann Arbor, MI, February 2019.
16. Clonal Hematopoiesis and Inflammatory Markers of Peripheral Artery Disease Progression in the ARIC Study. George and Angelina Kostas Research Center for Cardiovascular Nanomedicine Annual International Meeting. Houston Methodist Research Institute, Houston, TX, October 2017.

TEACHING:

UTHealth Houston, Instructor (regular course)

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|----------------------|---|
| 2017-2023 | PH 2612, Epidemiology I |
| 2016-2019, 2021-2024 | PH 2740, Cardiovascular Disease Epidemiology and Prevention |
| 2016, 2018-2020 | PH 2780, Applied Genetic Methods in Public Health |

UTHealth Houston, Guest Lecturer

| | |
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| 2022-2023 | PH2950, Genetic Epidemiology of Chronic Disease course |
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Baylor College of Medicine, Guest Lecturer

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| 2018-2024 | Atherosclerosis and Vascular Medicine |
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SERVICE:

Institutional Committees:

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|--------------|--|
| 2024-present | Chair, Faculty Award Committee |
| 2024-present | Chair, Human Genetics Center Faculty Research Committee |
| 2023-present | Member, Research Council |
| 2023-present | Co-Director, Human Genetics Center |
| 2023-2024 | Reviewer, PRIME Award |
| 2020-2022 | Member, Epidemiology Preliminary Exam Committee |
| 2018-present | Member, Faculty Award Committee |
| 2018-2020 | Member, Human Genetics Center Faculty Research Committee |
| 2017-present | Member, Epidemiology Curriculum Committee |

National Memberships:

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|--------------|--------------|
| 2021-present | Member, ASHG |
| 2012-present | Member, AHA |

Collaborative Studies and Consortia Activities:

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|--------------|--|
| 2016-present | Investigator, Trans-Omics for Precision Medicine (TOPMed) Program Co-convener, TOPMed Metabolomics and Proteomics Working Group |
| 2015-present | Investigator, Consortium of Metabolomics Studies (COMETS) Member, COMETS Steering and Executive Committee |
| 2015-2024 | Convener, COMETS Publication and Proposal Committee |
| 2010-present | Investigator, CHARGE Consortium Co-convener, COMETS Metabolomics and Proteomics Working Group |
| 2010-present | Investigator, Atherosclerosis Risk in Communities (ARIC) Study Member, ARIC Lab Committee |

Grant Reviews:

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| 2023-2027 | Standing member, NIH CRD study section |
| 2024 | Reviewer, NIH CRD 2024 05; CRD 2024 10; CRD 2025 01 |
| 2023 | Reviewer, NIH CRD 2023 05; CRD 2023 10; CRD 2024 01 |
| 2022 | Reviewer, NIH IRAP 2020 5; IRAP 2020 10; AHA Translational Project Award |
| 2021 | Reviewer, NIH ZRG1 PSE-N (02); ZRG1 PSE-W 02 M; Swiss National Science Foundation (NSF); AHA Predoctoral and Postdoctoral Fellowship Award |
| 2020 | Reviewer, NIH IRAP 2020 10; ZRG1 PSE-W (56) R; NHLBI Big Data Analysis Challenge; AHA Translational Project Award |
| 2019 | Reviewer, NIH IRG- ZES1 LWJ-K K 1; AHA Translational Project Award; AHA Predoctoral and Postdoctoral Fellowship Award; United Kingdom Chronic Disease Research Foundation (CDRF) |
| 2018 | Reviewer, United Kingdom CDRF AHA Uncovering New Patterns Grants and Fellowship |
| 2017 | Reviewer, Swiss NSF |