

Yaser M, MD, MPH, PhD

Tenure-track Assistant Professor, University of Texas Health Science Center at Houston
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SUMMARY

Trained Epidemiologist working on genetics and multi-omics underpinnings of complex traits. My research portfolio reflects diverse interests, including but not limited to metabolic disorders, infectious diseases, and neurocognitive traits. I am eager to contribute my expertise in investigative research, study design, and statistical modeling to advance the biological sciences and improve the well-being of individuals in the era of precision medicine.

EDUCATION AND EXPERIENCE

Education

University of North Carolina at Chapel Hill	NIDDK Postdoctoral Fellowship	Genetic Epidemiology	2025
University of Louisville	PhD	Epidemiology	2020
Johns Hopkins University	MPH	Public Health	2014
Herat University, Afghanistan	MD	Medicine	2008

Doctoral Dissertation: *Characterization of the adiposity and inflammation genetic pleiotropy underpinning cardiovascular risk factors in Hispanic Americans.*

Master's Thesis: *Infectious diseases trends in Afghanistan, during the decade of political transition (2004-2013).*

Professional Experience

University of Texas Health Science Center at Houston	Tenure-track Assistant Professor	2026-Curr
University of California, San Francisco, Institute for Human Genetics	Research specialist (part-time remote)	2025
University of North Carolina at Chapel Hill	Senior Postdoctoral Research Associate	2021-2025
University of Louisville	Graduate research assistant	2017-2020
Ghalib Medical Faculty, Afghanistan	Adjunct lecturer	2012-2013
Health Technical Support Unit, Afghanistan	Master trainer & technical analyst	2011-2013

Coordination of Humanitarian Assistance, Afghanistan	Health Program Monitor & Immunization Officer	2008-2010
Herat Regional Hospital, Afghanistan	Physician Trainer	2007-2008
UNICEF-Afghanistan	Polio Vaccinator (seasonal volunteer)	1999-2001

Honors

2017	Doctoral Fellowship Award, University of Louisville
2013	Recipient of Fulbright Scholarship
2012	Certificate of Excellence in Teaching, Ghalib Medical Institute
2008	Certificate of Academic Performance Excellence, Herat University

TEACHING EXPERIENCE

EPID743 Genetic Epidemiology	UNC Chapel Hill (Guest Lecturer)	2022-2024
Human Anatomy	Ghalib Medical Institute	2012-2013
Instructor for on-the-job training courses for healthcare professionals. Courses included (list is not exhaustive):	Health Technical Support Unit	2011-2013
1. Infection Prevention Practices		
2. Health Management Information System (HMIS)		
3. Expanded Program on Immunization (Vaccines)		
4. Behavioral Change Communication		
5. Integrated Management of Childhood Illnesses (IMCI)		
6. Primary Aids		
7. Community Health		
8. Family Planning		
Microsoft Office Package & MS-Windows	Private Courses (Part-time Tutor)	1999-2001
Mathematics, Physics, Trigonometry	Sultan High School (Volunteering at lower grade classes)	1999-2001

PRESENTATIONS AND GUEST LECTURES

1. Poster presentation “*Proteogenomic prioritization of targetable pathways in human obesity and related multi-system diseases*”, in American Society of Human Genetics (ASHG) annual conference (November 5 to 9, 2024, Denver, CO).

2. Guest Speaker, presenting “*Distinct Obesity Subtypes Characterized: Investigation of Multi-Omics Patterns Reveals Heterogeneous Nature of Obesity*”, in Obesity Week Symposium, November 4, 2024, San Antonio, TX.
3. Poster presentation “*Exploring Complex Causal Associations Between Severe Obesity and Lipid Species in Hispanic Americans Using Combined Mendelian Randomization-Network Deconvolution Approach*”, in ASHG annual conference (November 1-5, 2023, Washington, DC).
4. Poster presentation “*Characterization of Transcriptomic Variations and Molecular Pathways Associated With Type 2 Diabetes In Self-Identified Hispanic American Individuals*”, in American Society of Human Genetics (ASHG) annual conference (October 25 to 29, 2022, Los Angeles, CA).
5. Poster presentation “*Machine Learning Assisted Unsupervised Clustering Identified Obesity Subpopulations with Distinct Multi-Omics Profiles and Cardiovascular Risk Factors Patterns*”, CHARGE conference, Boston (May 9-11, 2022).
6. Poster presentation “*Adiposity and Inflammation Genetic Pleiotropy Underpinning Cardiovascular Diseases in Hispanics*”, in CHARGE meeting (2021).
7. Poster presentation “*Genetic Underpinning of Adiposity Distribution in Jackson Heart Study*”, in American Society of Human Genetics (ASHG) annual conference (October 15 to 19, 2019, Houston, TX).

PUBLICATION LIST (Under pen names: Anwar MY and Yaser M)

1. Cai Y, Wang Z, Kim M, Smit RAJ, Graham SE, Lundin J, Haessler J, Sousa RGM, Clarke SL, Sonehara K, Tao R, Zhu W, **Anwar MY**, Pozdeyev N, Lin M, Wang Y, Staeger F, Hilliard AT, Meyer M, Yousri NA, Rasmussen-Torvik LJ, Howard AG, Gordon-Larsen P, Kanai M, Okada Y, Albrechtsen A, Lange E, Lange L, Irvin R, Gignoux C, Below J, Assimes TL, Buyske S, Young KL, Willer C, North KE, Kooperberg C, Loos RJF, Peters U, Graf M. **Lipid Polygenic Risk Score Performance across populations: From Demographics to Clinical Implication.** (Accepted for publication in the *Journal of American Heart Association*)
2. **Anwar MY**, Highland HM, Palmer AB, Duong T, Lin Z, Zhu W, Sprinkles J, Kim D, Young KL, Chen HH, Krishnan M, Gutierrez A, Roshani R, Frankel EG, Landman J, Gordon-Larsen P, Lee M, Fisher-Hoch SP, McCormick JB, Meikle P, Giles C, Curran J, Blangero J, Below JE, North KE, Graff M. **The circulating lipidome in severe obesity.** (Accepted for publication in *iScience* journal)
3. Landman JM, Highland HM, Perry AS, Howard AG, Sheng Q, Lorenz A, Palmer AB, Zhao S, Zhu W, Zhang X, Buchanan VL, Frankel EG, Roshani R, Scartozzi A, Farber-Eger EH, Anwar MY, Sprinkles JK, Breidenbach A, Ting-Chen W, Ballard CA, Naylor M, Tamaroff J, Gutierrez A, Petty LE, Petty AS, Lippi B, Fernandez-Rhodes L, Chen HH, Krishnan K, Graff M, Meyer KA, Lee M, Young KL, Wells Q, Tanriverdi K, Freedman JE, Gamazon ER, McCormick JB, Fisher-Hoch SP, Gordon-Larsen P, Below JE, North KE, Shah, R. V. (2026). **Pediatric proteomic signatures of cardiometabolic disease-associated traits predict adult disease outcomes.** *Nature Metabolism*. DOI: 10.1038/s42255-026-01589-7

4. Zhu W, Chen HH, Highland HM, Giles C, Meikle PJ, Lin P, Petty LE, Polikowsky HG, Petty AS, **Anwar MY**, Zhang X, Curran JE, Frankel EG, Roshani R, Landman JM, Castrodad-Rivera GS, Herndon C, McCormick JB, Fisher-Hoch SP, Gordon-Larsen P, Gamazon ER, North KE, and Below JE. 2026. **Multi-omic Characterization of the Hispanic/Latino Blood Lipidome Reveals an Additional Locus and Attenuated Genetic Prediction.** *Human Genetics and Genomics Advances*. DOI: 10.1016/j.xhgg.2026.100664
5. Kim D, Polikowsky H, Highland H, Chen H-H, Zhu W, Zhang X, Gillman M, Frankel E, Roshani R, Landman J, Wang Y, Young K, **Anwar MY**, Krishnan M, Buchanan V, Berndt S, Arias J, Raffield L, Gutierrez A, Bishehsari F, Lee M, McCormick J, Fisher-Hoch S, Below J, North K, Graff M. **Integrated Genomic and Transcriptomic Study Reveals MAPK11 and PER1 as Important Obesity Susceptibility Genes in a High-risk Hispanic/Latino Population.** *Circulation: Genomic and Precision Medicine*. DOI: 10.1161/CIRCGEN.125.005298
6. El-Sabawi B, Huang X, Lin P, **Anwar MY**, Betti M, Lin P, Kim N, Perry AS, Perera B, Gajjar P, Colangelo LA, Amancherla K, Sheng Q, Zhao S, Stolze L, Farber-Eger E, Landman JM, Miller PE, Liu G, Das S, Wells QS, Terry JG, Lloyd-Jones D, Das S, Khan SS, North KE, Below J, Naylor M, Kalhan R, Carr JJ, Gamazon ER, Shah RV. **Proteogenomic Analysis of Coronary Artery Calcification in Human Populations.** *Arteriosclerosis, Thrombosis, and Vascular Biology*. DOI: 10.1161/ATVBAHA.125.324
7. Lee MP, Koenigsberg SH, **Anwar MY**, Raffield LM, Lin Z, Ballou AF, Booth JN III, Davy-Mendez T, Kassahun H, Kent ST, López JAG, Monda KL, North KE, Yarosh R, Ballantyne CM, Graff M, Avery CL. **Lp(a) Has Specific Effects on Coronary Artery Disease Independent of LDL-C: A Mendelian Randomization Study.** *JACC: Advances*. DOI: 10.1016/j.jacadv.2026.102697
8. Kakar A, Litkowski EM, Scadden AW, **Anwar MY**, Konigsberg IR, Stanislawski MA, DuPre NC, Mitra R, Baumgartner R, Raffield LM, Lange EM, Lange LA, Taylor KC. **A multi-ethnic polygenic risk score for chronic kidney disease is associated with increased risk of hypertension in African American individuals.** *BMC Nephrology* 26, 524 (2025). DOI: 10.1186/s12882-025-04425-4
9. Xu H, Gupta S, Dinsmore I, Kollu A, Cawley AM, **Anwar MY**, Chen HH, Petty LE, Seshadri S, Graff M, Below P, Brody JA, Chittoor G, Fisher-Hoch SP, Heard-Costa NL, Levy D, Lin H, Loos RJF, McCormick JB, Rotter JI, Mirshahi T, Still CD, Destefano A, Cupples LA, Mohlke KL, North KE, Justice AE, Liu C-T. **Integrating genetic and transcriptomic data to identify genes underlying obesity risk loci.** *International Journal of Obesity* (2025). DOI: 1038/s41366-025-01898-z
10. **Anwar MY**, Highland HM, Sheng Q, Chen HH, Roshani R, Frankel EG, Landman J, Kim D, Young KL, Zhu W, Krishnan M, Gutierrez A, Gordon-Larsen P, Lee M, Gamazon ER, Amancher K, Das S, Betti MJ, Fisher-Hoch SP, McCormick JB, Below JE, Graff M, Shah RV, North KE. **Multi-omics of human obesity and related multi-system diseases.** *Journal of Clinical Endocrinology & Metabolism* (2025). DOI:10.1210/clinem/dgaf373/8172348

11. Palmer AB, Lee KH, Roshani R, Frankel E, Lee M, **Anwar MY**, Highland HM, Young KL, Graff M, McCormick JB, Fisher-Hoch SP, Samuel JP, Below JE, North KE, Gordon-Larsen P. **Prevalence of obesity with confirmed excess adiposity in US children and adolescents.** *JAMA Pediatrics* (2025). DOI: 10.1001/jamapediatrics.2025.2991
12. Krishnan M, **Anwar MY**, Justice AE, Chittoor G, Chen HH, Roshani R, Smit RAJ, Preuss MH, Chami N, Hadad BS, Parra EJ, Cruz M, Hui Q, Wilson PWF, Sun YV, Zhang X, Linchangco GV, Kardias SLR, Faul JD, Weir DR, Bielak LF, Highland HM, Young KL, Qi B, Wang Y, Fornage M, Haiman C, Cheng I, Peters U, Kooperberg C, Buyske S, McCormick JB, Fisher-Hoch SP, Lona-Durazo F, Peralta J, Gomez-Zamudio J, Rich SS, Ferrier KR, Lange EM, Gignoux CG, Kenny EE, Wojcik GL, Cho K, Gaziano MJ, Djousse L, Liu S, Vaidya D, de Mutsert R, Josyula NS, Bauer CR, Zhao W, Walker RW, Smith JA, Lange LA, Meyer MC, Liu C-T, Yanek LR, Lee M, Raffield LM, Loos RJF, Gordon-Larsen P, Below JE, North KE, Graff M. **Large scale genome-wide association study in adult diverse populations provide novel insight about severe obesity.** *PLOS Genetics* (2025). DOI: 10.1371/journal.pgen.1011842
13. Chen HH, Highland HM, Frankel EG, Scartozzi AC, Zhang X, Roshani R, Sharma P, Kar A, Buchanan VL, Polikowsky HG, Lauren EP, Seo J, **Anwar MY**, Kim D, Graff M, Young KL, Zhu W, Karastergiou K, Shaw DM, Justice AE, Fernandez-Rhodes L, Krishnan M, Gutierrez A, McCormick PJ, Aguilar-Salinas CA, Tusié-Luna MT, Muñoz-Hernandez LL, Herrera-Hernandez M, Lee M, Gamazon ER, Cox NJ, Pajukanta P, Fried SK, Gordon-Larsen P, Shah RV, Fisher-Hoch SP, McCormick JB, North KE, Below JE. **Multomics reveal key inflammatory drivers of severe obesity: IL4R, LILRA5, and OSM.** *Cell Genomics* 5.3 (2025). DOI: 10.1016/j.xgen.2025.100784
14. Downie CG, Shrestha P, Samson Okello, **Yaser M**, Lee HH, Wang Y, Krishnan M, Chen HH, Justice AE, Chittoor G, Josyula NS, Gahagan S, Blanco E, Burrows R, Correa-Burrows P, Albala C, Santos JL, Angel B, Lozoff B, Hartwig FP, Horta B, Brina KR, Brina KR, Qi Q, Gallo LC, Perreira KM, Thyagarajan B, Daviglus M, Horn LV, Franklyn G, Bradfield JP, Harkonarson H, Grant SFA, Below JE, Felix J, Graff M, Divaris K, North KE. **Trans-ancestry genome-wide association study of childhood body mass index identifies novel loci and age-specific effects.** *Human Genetics and Genomics Advances* 6.2 (2025). DOI: 10.1016/j.xhgg.2025.100411
15. **Anwar MY**, Highland HM, Buchanan VL, Graff M, Young K, Taylor KD, Tracy RP, Durda P, Liu Y, Johnson CW, Aguet F, Ardlie KG, Gerszten RE, Clish CB, Lange LA, Ding J, Goodarzi MO, Chen Y-DI, Peloso GM, Guo X, Stanislawski MA, Rotter JI, Rich SS, Justice AE, Liu C-T, North K. **Machine learning-based clustering identifies obesity subgroups with differential multi-omics profiles and metabolic patterns.** *Obesity* 2024;32(11):2024-2034. DOI: 10.1002/oby.24137
16. **Anwar MY**, Graff M, Highland HM, Smit R, Wang Z, Buchanan VL, Young KL, Kenny EE, Fernandez-Rhodes L, Liu S, Assimes T, Garcia DO, Kim D, Gignoux CR, Justice AE, Haiman CA, Buyske S, Peters U, Loos RJF, Kooperberg C, North KE. **Assessing efficiency of fine-mapping obesity-associated variants**

through leveraging ancestry architecture and functional annotation using PAGE and UKBB cohorts.

Hum Genetics 2023;142(8):1477-1489. DOI: 10.1007/s00439-023-02593-7

17. Kim D, Memili A, Chen HH, Highland HM, Polikowsky HG, **Anwar MY**, Laing ST, Lee M, McCormick JB, Fisher-Hoch SP, Below JE, North KE, Gutierrez AD. **Sex-specific associations between adipokine profiles and carotid intima-media thickness in the Cameron County Hispanic Cohort (CCHC).** *Cardiovasc Diabetology* 2023;22(1):231. DOI: 10.1186/s12933-023-01968-4
18. **Anwar MY**, Baldassari AR, Polikowsky HG, Sitlani CM, Highland HM, Chami N, Chen HH, Graff M, Howard AG, Jung SY, Perdue LE, Wang Z, Zhu W, Buyske S, Cheng I, Kaplan R, Kooperberg C, Loos RJF, Peters U, McCormick JB, Fisher-Hoch SP, Avery CL, Taylor KC, Below JE, North KE. **Genetic pleiotropy underpinning adiposity and inflammation in self-identified Hispanic/Latino populations.** *BMC Medical Genomics* 2022;15(1):1-11. DOI: 10.1186/s12920-022-01352-3
19. **Anwar MY**, Raffiel LM, Lange LA, Correa A, Taylor KC. **Genetic underpinnings of regional adiposity distribution in African Americans: Assessments from the Jackson Heart Study.** *PloS ONE* 16.8 (2021): e0255609. DOI: 10.1371/journal.pone.0255609
20. **Anwar MY**, Marcus M, and Taylor KC. **The association between alcohol intake and fecundability during menstrual cycle phases.** *Human Reproduction* 36.9 (2021): 2538-2548. DOI: 10.1093/humrep/deab121
21. **Anwar MY**, Warren JL, Pitzer VE. **Diarrhea Patterns and Climate: a spatiotemporal analysis of diarrheal disease in Afghanistan.** *American Journal of Tropical Medicine and Hygiene* 18-0735 101.3 (2019): 525. DOI: 10.4269/ajtmh.18-0735
22. **Anwar MY**, Burnham G. **Trends in infectious disease incidence among children in Afghanistan at a time of public health services expansion.** *East Mediterranean Health J.* 2016 Feb 1; 22(11):778-785.
23. **Mohammad Y. Anwar**, Lewnard JA, Sunil Parikh, Virginia E. Pitzer. **Time series analysis of malaria in Afghanistan: using ARIMA models to predict future trends in incidence.** *Malaria journal* 15.1 (2016): 1-10. DOI: 10.1186/s12936-016-1602-1

Pre-publication Stages:

1. Chen HH, Graff M, Zhu W, Perdue LE, Highland HM, Roshani R, Polikowsky HG, Lorenz AS, Frankel E, Landman JM, **Anwar MY**, Avery CL, Young KL, Fernandez-Rhodes L, Gordon-Larsen P, Fisher-Hoch SP, McCormick JB, Gamazon ER, North KE, Below JE. **Local ancestry modulates gene expression: shifting our understanding of genetic regulation and disease association within and across populations.** (Under review in *Science*)
2. Koenigsberg, Sarah H, **Anwar MY**, Lee Moa P, Raffield LM, Graff M, Avery CL. Limited Evidence of Direct Effects of Tyrosine and Phenylalanine on Cardiometabolic Traits. (Under review in *Diabetes & Metabolic Syndrome: Clinical Research & Reviews*).

Non-English publications (Persian Language)

3. **Anwar M. Y.**, “Ebola: a price imposed by disrupted nature”, *Ghalib Journal*, 2017 (available in print only).
4. **Anwar, M. Y.**, “Antibiotic resistance: do we need to reassess our approach?”, *Herat University Journal*, 2015 (available in print only).

SKILLS

- Programming and statistical analyses using R, STATA, and SAS.
- Familiarity with Python coding, Geographic Information System (GIS), and basic SQL.
- Linux-based coding and bash scripting.
- Machine Learning methods.
- Quality control, pathway, and functional annotation analyses of genetic data.
- Multi-omics analyses (transcripts, proteomics, methylations, metabolites).
- Infectious disease modeling studies.
- Experience with high-dimensional data.
- Mentorship and teaching.
- Grant/proposal writing.
- Working with large-scale bioinformatic/genetic databases (e.g., TOPMed, PAGE, UKBB, 1000G, dbGap etc.).
- Study conceptualization, design, and leading investigation.

EXTRA-CURRICULAR CERTIFICATIONS

- Next Generation Sequencing
- R-Programming
- Pathway & Network Analysis for Omics Data
- Essentials of Python Programming
- Big Data and Genes
- Machine Learning Boot Camp

PROFESSIONAL SOCIETY & WORKING GROUP MEMBERSHIPS

- American Heart Association (AHA) (2019-20) as student trainee.
- American Society of Tropical Medicine and Hygiene (ASTMH) (2018-2019).
- American Society of Human Genetics (ASHG) (2019-Current) as student trainee.
- Affiliated with the following study cohorts: TOPMed, PAGE, HCSC/SOL, UKBB, and HPV.
- Trans-Omics for Precision Medicine (TOPMed), anthropometry working group (2022-current).
- Population Architecture for Genetic Epidemiology (PAGE), anthropometry working group (2021-current).
- Cameron County Hispanic Cohort working group (2019- current).
- Study of Latinos-Investigation of Neurocognitive Aging (SOL-INCA) working group (2025-current).

PROFESSIONAL SOCIAL MEDIA PROFILE

1. **LinkedIn:** Yaser M (Anwar), MB, MPH, PhD - Postdoctoral Research Associate - University of North Carolina at Chapel Hill | LinkedIn

MENTORING ACTIVITIES (restricting to select recent)

Name	Period	Trainee Program	Mentoring Activity
Lindsey A. Woods	2018-2019	MPH	Statistical analysis with SAS
Aylin Memeli	2021-2022	MPH	Quantitative study design, Statistical analyses with R

Samson Okello	2022-2025	Predoctoral	Quantitative study design, Application of genetic epidemiology Methods
Sarah Koenigsberg	2023-2024	PhD Candidate	Causal analysis methods, Code development
Ly Tran	2025-Present	Undergraduate Research Intern	GWAS, Gene mapping, Enrichment Analysis

REFERENCES

1. Richard Baumgartner, Professor of Epidemiology, School of Public Health & Information Sciences, University of Louisville, Tel: 502-852-4063, email: richard.baumgartner@louisville.edu.
2. Kira C. Taylor, BA, MSc, PhD, Associate Professor, School of PH and Information Sciences, University of Louisville, Tel: 502-852-4063, email: kira.taylor@louisville.edu.
3. Joseph McCormick, Professor & James H. Steele, D.V.M. Professorship, School of Public Health, University of Texas Health Houston, Tel: 956-755-0605, email: Joseph.B.McCormick@uth.tmc.edu.
4. Jennifer 'Piper' E. Below, PhD, Professor of Medicine, Director of Vanderbilt Genetics Institute, Vanderbilt University Medical Center, Tel: 510-289-2578, email: jennifer.e.below@vanderbilt.edu.
5. Mariaelisa (Misa) Graff, PhD, Assistant Professor, Gillings School of Public Health, University of North Carolina at Chapel Hill, Tel: 512-589-1712, email: migraff@email.unc.edu.
6. Virginia E. Pitzer, ScD, Associate Professor of Epidemiology, Yale School of Public Health, Yale University, Tel: 203-785-5053, email: Virginia.pitzer@yale.edu.
7. North KE, Professor of Internal Medicine, McGovern Medical School, UTHealth, email: 919-966-2148, email: Kari.E.North@uth.tmc.edu.