

CURRICULUM VITAE

November 15, 2024

Yunro Chung

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Education

University of North Carolina at Chapel Hill, Chapel Hill, NC

Ph.D., Biostatistics, 2016

Chung-Ang University, Seoul, South Korea

M.S., Statistics, 2008

B.S., Statistics, 2006

Employment

Arizona State University (ASU), Phoenix, AZ

Assistant Professor, Biostatistics Program, College of Health Solutions, 2024-present

Assistant Professor, Biomedical Informatics Program, College of Health Solutions, 2018-present

Faculty Member, Center for Personalized Diagnostics, Biodesign Institute, 2018-present

Fred Hutchison Cancer Center, Seattle, WA

Postdoctoral Fellow, Biostatistics and Biomathematics Program, Public Health Sciences Division,
2016-2018

SAS Institute, Cary, NC

Summer Statistical Fellow, Statistical Software Development Division, 2015

Novartis, Florham Park, NJ

Summer Intern, Oncology Business Unit, 2012

University of North Carolina at Chapel Hill, Chapel Hill, NC

Graduate Research Assistant (GRA), NC Transitional and Clinical Science Institute, 2015-2016

GRA, School of Dentistry, 2009-2013, Summer of 2014

GRA, Biometric Consulting Laboratory, Summer of 2010, 2011 & 2013

Korea Food and Drug Administration, Seoul, South Korea

Biostatistician, Biostatistics Division, National Institute of Toxicology Research, 2008-2009

Awards & Honors

Faculty Research Award, College of Health Solutions, ASU, 2023

Marci K. Campbell Dissertation Award, Lineberger Comprehensive Cancer Center, University of North Carolina at Chapel Hill, Chapel Hill, NC, 2015

Young Research Travel Award, International Conference on Advances in Interdisciplinary Statistics and Combinatorics, Greensboro, NC, 2014

Oak Ridge Institute for Science and Education (ORISE) Fellowship for PhD Dissertation Research, US Food and Drug Administration, 2013-2016

Professional Membership

American Statistical Association

Western North American Region, International Biometric Society

Korean International Statistics Society

Research Interests

Biostatistics

Isotonic regression

Survival analysis

Receiver operating characteristics (ROC) curve

Statistical applications in diagnostic research, clinical trials, and epidemiological studies

Publications from ASU

§ denotes students under Chung's supervision.

Peer-reviewed Publications (Methodological Part):

1. **Chung, Y.**, Ivanova, A. and Fine, J.P. 2024, Additive isotonic proportional hazards models, Submitted to *Statistics in Biosciences*, In press.
2. **Chung, Y.**, 2024. Nonparametric estimation of proportional hazards with monotone baseline hazard and covariate effect, *Statistics in Biosciences*. In press.
3. Chen, D., **Chung, Y.**, and Beyene, K., 2024. Estimate time-to-infection (TTI) vaccination effect when TTI for unvaccinated group is unknown, *Statistics in Biosciences*. In press.
4. §Zhang, Y. and **Chung, Y.**, 2024. Nonparametric estimation of linear personalized diagnostics rules via efficient grid algorithm, *Statistics in Medicine*, 43(7), pp.1354-1371.
5. **Chung, Y.**, Ivanova, A. and Fine, J.P., 2024. Shape restricted additive hazards models: monotone, unimodal and u-shape hazard functions, *Statistics in Medicine*, 43(9), pp.1671-1687.
6. Ahmadinejad, N., †**Chung, Y.**, †Li, L., 2023. J-score: a robust measure of clustering accuracy, *PeerJ Computer Science*, 9, e1545. († denotes co-corresponding authors)
7. **Chung, Y.**, Ivanova, A., Hudgens, M.G. and Fine, J.P., 2018. Partial likelihood estimation of isotonic proportional hazards models. *Biometrika*, 105(1), pp.133-148.

Peer-reviewed Publications (Collaborative Part):

8. Koehler, M.A., Song, L., Grill, F.J., Shubitz, L.F., Powell, D.A., Galgiani, J.N., Orbach, M.J., Robb, E.J., **Chung, Y.**, Williams, S.A. and Murugan, V., 2024. Discovery of a unique set of dog-seroreactive coccidioides proteins using nucleic acid programmable protein array. *Journal of Fungi*, 10(5), 307.
9. Song, L., Rauf, F., Hou, C.W., Qiu, J., Murugan, V., **Chung, Y.**, Lai, H., Adam, D., Magee, D.M., Trivino Soto, G. and Peterson, M., 2024. Quantitative assessment of multiple pathogen exposure and immune dynamics at scale. *Microbiology Spectrum*, 12(1), e02399-23.
10. Grill, F.J., Svarovsky, S., Gonzalez-Moa, M., Kaleta, E., Blair, J.E., Lovato, L., Grant, R., Ross, K., Linnehan, B.K., Meegan, J., Reilly, K.S., Brown A., Williams S., **Chung Y.**, Magee D.M., Gryns T.E., Lake D.F., 2023, Development of a rapid lateral flow assay for detection of anti-coccidioidal antibodies. *Journal of Clinical Microbiology*, 61(9), e00631-23

11. Jehanathan, N., Kapuruge, E.P., Rogers, S.P., Williams, S., **Chung, Y.** and Borges, C.R., 2023. Oxidized LDL is stable in human serum under extended thawed-state conditions ranging from -20° C to room temperature. *Journal of Mass Spectrometry and Advances in the Clinical Lab*, 27, pp.18-23.
12. Hou, C.W., Williams, S., Taylor, K., Boyle, V., Bobbett, B., Kouvetakis, J., Nguyen, K., McDonald, A., Harris, V., Nussle, B., Scharf, P., Jehn, M.L., Lant, T., Magee, M., **Chung, Y.**, LaBaer, J. and Murugan, V. 2023. Serological survey to estimate SARS-CoV-2 infection and antibody seroprevalence at a large public university: A cross-sectional study. *BMJ open*, 13(8), 072627.
13. Lal, D., Song, L., Brar, T., Cope, E.K., Keim, P., Williams, S., **Chung, Y.**, Murugan, V., LaBaer, J. and Magee, D.M., 2023, Antibody responses to the host microbiome in chronic rhinosinusitis. In *International Forum of Allergy & Rhinology*, 13(8), pp. 1503-1510.
14. Ruschel, V.C., Stolf, S.C., da Luz Baratieri, C., **Chung, Y.**, Boushell, L.W., Baratieri, L.N. and Walter, R., 2023. Five-year clinical evaluation of universal adhesives in noncarious cervical Lesions. *Operative Dentistry*, 48(4), pp.364-372.
15. Qiu, J., Engelbrektsen, A., Song, L., Park, J.G., Murugan, V., Williams, S., **Chung, Y.**, Pompa-Mera, E.N., Sandoval-Ramirez, J.L., Mata-Marin, J.A. and Gaytan-Martinez, J., 2023. Comparative analysis of antimicrobial antibodies between mild and severe COVID-19. *Microbiology Spectrum*, 11(4), e0469022.
16. Sullivan, M., Huberty, J., **Chung, Y.** and Stecher, C., 2023. Mindfulness meditation app abandonment during the COVID-19 pandemic: an observational study. *Mindfulness*, 14(6), pp.1506-1521.
17. Song, L., Song, M., Rabkin, C.S., **Chung, Y.**, Williams, S., Torres, J., Corvalan, A.H., Gonzalez, R., Bellolio, E., Shome, M. and LaBaer, J., 2023. Identification of anti-helicobacter pylori antibody signatures in gastric intestinal metaplasia. *Journal of Gastroenterology*, 58(2), pp.112-124.
18. Shome, M., Gao, W., Engelbrektsen, A., Song, L., Williams, S., Murugan, V., Park, J.G., **Chung, Y.**, LaBaer, J. and Qiu, J., 2023. Comparative microbiomics analysis of antimicrobial antibody response between patients with lung cancer and control subjects with benign pulmonary nodules. *Cancer Epidemiology, Biomarkers & Prevention*, 32(4), pp.496-504.
19. Kapuruge, E.P., Jehanathan, N., Rogers, S.P., Williams, S., **Chung, Y.** and Borges, C.R., 2022. Tracking the Stability of Clinically Relevant Blood Plasma Proteins with delta-s-cys-albumin – a dilute-and-shoot LC/MS-based marker of specimen exposure to thawed conditions. *Molecular & Cellular Proteomics*, 21(11), 100420.
20. Shome, M., Song, L., Williams, S., **Chung, Y.**, Murugan, V., Park, J.G., Faubion, W., Pasha, S.F., Leighton, J.A., LaBaer, J. and Qiu, J., 2022. Serological profiling of Crohn’s disease and ulcerative colitis patients reveals anti-microbial antibody signatures. *World journal of gastroenterology*, 28(30), pp.4089-4101.
21. Shome, M., **Chung, Y.**, Chavan, R., Park, J.G., Qiu, J. and LaBaer, J., 2022. Serum autoantibodyome reveals that healthy individuals share common autoantibodies. *Cell Reports*, 39(9), 110873.
22. O’Kell, A.L., Shome, M., Qiu, J., Williams, S., **Chung, Y.**, LaBaer, J., Atkinson, M.A. and Wasserfall, C., 2022. Exploration of autoantibody responses in canine diabetes using protein arrays. *Scientific Reports*, 12, 2490.
23. Song, L., Song, M., Camargo, M.C., Van Duine, J., Williams, S., **Chung, Y.**, Kim, K.M., Lissowska, J., Sivins, A., Gao, W. and Karthikeyan, K., 2021. Identification of anti-Epstein-Barr virus (EBV) antibody signature in EBV-associated gastric carcinoma. *Gastric Cancer*, 24(4), pp.858-867.
24. Park, D., Ro, M., Lee, A.J., Kwak, D.W., **Chung, Y.** and Kim, J.H., 2021. Contributory role of BLT2 in the production of proinflammatory cytokines in cecal ligation and puncture-induced sepsis. *Molecules and Cells*, 44(12), pp.893-899.
25. Stecher, C., Berardi, V., Fowers, R., Christ, J., **Chung, Y.** and Huberty, J., 2021. Identifying app-based meditation habits and the associated mental health benefits: longitudinal observational study. *Journal of Medical Internet Research*, 23(11), e27282.

26. Song, L., Song, M., Rabkin, C.S., Williams, S., **Chung, Y.**, Van Duine, J., Liao, L.M., Karthikeyan, K., Gao, W., Park, J.G. and Tang, Y., 2021. Helicobacter pylori immunoproteomic profiles in gastric cancer. *Journal of Proteome Research*, **20**(1), pp.409-419.
27. Lee, T., **Chung, Y.**, Poulton, C.J., Derebail, V.K., Hogan, S.L., Reich, H.N., Falk, R.J. and Nachman, P.H., 2020. Serum albumin at partial remission predicts outcomes in membranous nephropathy. *Kidney International Reports*, **5**(5), pp.706-717.
28. Davis, J.M., Ivanova, A., **Chung, Y.**, Shaw, J.R., Rao, K.V., Ptachcinski, J.R., Sharf, A.A., Serody, J.S., Armistead, P.M., Wood, W.A. and Coghill, J.M., 2019. Evaluation of a test dose strategy for pharmacokinetically-guided busulfan dosing for hematopoietic stem cell transplantation. *Biology of Blood and Marrow Transplantation*, **25**(2), pp.391-397.
29. Ruschel, V.C., Stolf, S.C., Shibata, S., **Chung, Y.**, Boushell, L.W., Baratieri, L.N. and Walter, R., 2019. Three-year clinical evaluation of universal adhesives in non-carious cervical lesions. *American Journal of Dentistry*, **32**(5), pp.223-228.
30. Farias, D.C.S., Gonçalves, L.M., Walter, R., **Chung, Y.** and Blatz, M.B., 2019. Bond strengths of various resin cements to different ceramics. *Brazilian Oral Research*, **33**, e095.
31. Wang, C., Preisser, J., **Chung, Y.** and Li, K., 2018. Complementary and alternative medicine use among children with mental health issues: results from the National Health Interview Survey. *BMC Complementary and Alternative Medicine*, **18**(1), pp.1-17.
32. Ruschel, V.C., Shibata, S., Stolf, S.C., **Chung, Y.**, Baratieri, L.N., Heymann, H.O. and Walter, R., 2018. Eighteen-month clinical study of universal adhesives in noncarious cervical lesions. *Operative Dentistry*, **43**(3), pp.241-249.
33. Park, J., Jang, J.H., Park, G.S., **Chung, Y.**, You, H.J. and Kim, J.H., 2018. BLT2, a leukotriene B4 receptor 2, as a novel prognostic biomarker of triple-negative breast cancer. *BMB reports*, **51**(8), pp.373-377.

Published Book Chapters:

34. **Chung, Y.**, 2021. Statistical Methods for Analysis of Protein Microarray Data Using R. *Protein Microarrays for Disease Analysis: Methods and Protocols*, pp.269-279.

Publications prior to ASU

Peer-reviewed Publications (Collaborative Part):

35. Bak, S.Y., Qi, X.S., Kelly, J.A., Alexander, S., **Chung, Y.**, Gyurdzhyan, S., Patton, L.L. and Lee, S.P., 2016. Dosimetric distribution to tooth-bearing areas in intensity-modulated radiation therapy for head and neck cancer: a pilot study. *Oral Surgery, Oral Medicine, Oral Pathology and Oral Radiology*, **121**(1), pp.43-48.
36. Lee, T., Derebail, V.K., Kshirsagar, A.V., **Chung, Y.**, Fine, J.P., Mahoney, S., Poulton, C.J., Lionaki, S., Hogan, S.L., Falk, R.J. and Cattran, D.C., 2016. Patients with primary membranous nephropathy are at high risk of cardiovascular events. *Kidney International*, **89**(5), pp.1111-1118.
37. Ritter, A.V., Preisser, J.S., Puranik, C.P., **Chung, Y.**, Bader, J.D., Shugars, D.A., Makhija, S. and Vollmer, W.M., 2016. A predictive model for root caries incidence. *Caries Research*, **50**(3), pp.271-278.
38. Boushell, L.W., Heymann, H.O., Ritter, A.V., Sturdevant, J.R., Swift Jr, E.J., Wilder Jr, A.D., **Chung, Y.**, Lambert, C.A. and Walter, R., 2016. Six-year clinical performance of etch-and-rinse and self-etch adhesives. *Dental Materials*, **32**(9), pp.1065-1072.
39. Shea, T.C., Walko, C., **Chung, Y.**, Ivanova, A., Sheets, J., Rao, K., Gabriel, D., Comeau, T., Wood, W., Coghill, J. and Armistead, P., 2015. Phase I/II trial of dose-escalated busulfan delivered by prolonged continuous infusion in allogeneic transplant patients. *Biology of Blood and Marrow Transplantation*, **21**(12), pp.2129-2135.

40. Walter, R., Boushell, L.W., Heymann, H.O., Ritter, A.V., Sturdevant, J.R., Wilder Jr, A.D., **Chung, Y.** and Swift Jr, E.J., 2014. Three-year clinical evaluation of a silorane composite resin. *Journal of Esthetic and Restorative Dentistry*, 26(3), pp.179-190.
41. Lee, T., Gasim, A., Derebail, V.K., **Chung, Y.**, McGregor, J.G., Lionaki, S., Poulton, C.J., Hogan, S.L., Jennette, J.C., Falk, R.J. and Nachman, P.H., 2014. Predictors of treatment outcomes in ANCA-associated vasculitis with severe kidney failure. *Clinical Journal of the American Society of Nephrology*, 9(5), pp.905-913.
42. Essick, G., Phillips, C., **Chung, Y.** and Trotman, C.A., 2013. Effects of lip revision surgery on long-term orosensory function in patients with cleft lip/palate. *The Cleft Palate-Craniofacial Journal*, 50(5), pp.507-512.
43. Walter, R., Feiring, A.E., Boushell, L.W., Braswell, K., Bartholomew, W., **Chung, Y.**, Phillips, C., Pereira, P.N. and Swift, E.J., 2013. One-year water sorption and solubility of “all-in-one” adhesives. *Brazilian Dental Journal*, 24(4), pp.344-348.
44. McFarland, T.B.H., Quinonez, R.B., Phillips, C., Lee, J. and **Chung, Y.**, 2013. Provision of preventive oral health services to infants and toddlers: North Carolina general dentists' readiness. *Journal of Oral Health & Community Dentistry*, 7(3), pp.140-147.
45. Ritter, A.V., Preisser, J.S., **Chung, Y.**, Bader, J.D., Shugars, D.A., Amaechi, B.T., Makhija, S.K., Funkhouser, K.A., Vollmer, W.M. and X-ACT Collaborative Research Group, 2012. Risk indicators for the presence and extent of root caries among caries-active adults enrolled in the Xylitol for Adult Caries Trial (X-ACT). *Clinical oral Investigations*, 16(6), pp.1647-1657.
46. Walter, R., Swift Jr, E.J., Nagaoka, H., **Chung, Y.**, Bartholomew, W., Braswell, K.M. and Pereira, P.N., 2012. Two-year bond strengths of “all-in-one” adhesives to dentine. *Journal of dentistry*, 40(7), pp.549-555.
47. Phillips, C., Essick, G.K., **Chung, Y.** and Blakey, G., 2012. Non-invasive therapy for altered facial sensation following orthognathic surgery: an exploratory randomized clinical trial of intranasal vitamin B12 spray. *Journal of Maxillofacial Trauma*, 1(1), p.20-29.

Published Book Chapters:

48. Zink, R.C., Koch, G.G., **Chung, Y.** and Wiener, L.E., 2017. Advanced Randomization-Based Methods. *Analysis of Clinical Trials Using SAS: A Practical Guide*, pp.67-86.

Grant Funding

Dollar amount is total obligated for award period listed. If funding is for a subcontract, dollar amount is for the subcontract only, not the entire project.

Active:

1. 21X089 (PI: LaBaer), Leidos (Prime: National Cancer Institute), Multiplexed in-solution serological test for SARS-CoV-2, human coronaviruses and other respiratory pathogens, \$14,922,843, Co-I, 15% effort, 10/2021-09/2025
2. U01 IP001180 (PI: Murugan), Centers for Disease Control and Prevention, Platform to Assess Influenza and COVID-19 Vaccine Effectiveness in Underserved Arizona Populations - Components A & D, \$12,999,999, Co-I, 10% effort, 09/2022-09/2027
3. U01CA281660 (PI: Anderson), National Cancer Institute, Southwest EDRN clinical validation center for head and neck cancer, \$5,810,685, Co-I, 14% effort, 08/2023-07/2028
4. U2C CA271903 (PI: LaBaer), National Cancer Institute, High-throughput immunoproteomics for cancer biomarker discovery, \$5,517,516, Co-I, 11% effort, 09/2022-08/2027

5. R01 CA286128 (PI: Qiu), National Cancer Institute, Serum biomarkers to predict immune related adverse events and benefit from single agent pembrolizumab therapy in early stage triple negative breast cancer, \$3,950,448, Co-I, 20% effort, 12/2023-11/2028
6. 20887 (PI: Murugan), University of Maryland, Baltimore (Prime: Defense Advanced Research Projects Agency), Assessing immune memory, \$2,510,814, Co-I, 15% effort, 12/2022-05/2027
7. R01 AI55954 (PIs: Magee & Lake), National Institute of Allergy and Infectious Diseases, Serological biomarkers for coccidioidomycosis, \$1,518,970, Co-I, 10% effort, 06/2021-05/2025
8. 1R34 AA030489-01 (PI: Ogbonnaya), National Institute on Alcohol Abuse and Alcoholism, Improving HIV care engagement among Ugandan adolescent girls and young women through reductions in male partner alcohol use and intimate partner violence risk: the Kisoboka Mukwano intervention, \$662,079, Co-I, 10% effort, 09/2022-08/2025
9. RFGA2022-010-20 (PI: LaBaer), Arizona Biomedical Research Commission, Comprehensive genomic and immunological analysis to improve personalized management of Lynch syndrome, \$750,000, Co-I, 30% effort, 01/2023-01/2026
10. R21 CA250999 (PI: Borges), National Cancer Institute, Aliquot-level visual indicators of biospecimen exposure to thawed conditions, \$617,052, Co-I, 25% effort, 02/2022-01/2025
11. R21 CA26909 (PI: Borges), National Cancer Institute, Plate reader assays to forensically assess exposure of plasma and serum to thawed conditions, \$199,584, Collaborator, 10% effort, 06/2022-05/2025

Completed:

12. W911NF19C0039 (PI: LaBaer), Defense Advanced Research Projects Agency, Diagnostic epigenetics of infectious agents and chemical toxicity, \$4,539,173, Co-I, 5% effort, 07/2019-12/2020
13. U01 CA214201 (PI: LaBaer), National Cancer Institute, Novel approaches to study immune responses to post translational modifications for cancer detection, \$2,622,242, Co-I, 10% effort, 09/2021-08/2022
14. 2950007-01 (PI: LaBaer), Northern Arizona University (Prime: Arizona Board of Regents), Arizona universities collaborate on CoV-2 variant detection, monitoring, and impact, \$1,000,000, Co-I, 16% effort, 07/2021-12/2022
15. ARI-299909 (PI: LaBaer), Mayo Clinic, Tailoring perianal Crohn's Disease management through molecular fingerprinting: developing more personalized and effective therapeutic strategies, \$174,002, Co-I, 25% effort, 06/2022-06/2023
16. ARI-303156 (PI: LaBaer), ASU-Mayo Clinic Seed Grant, Comprehensive genomic and immunological analysis to improve personalized management of Lynch syndrome, \$60,000, Co-I, 25% effort, 07/2022-06/2023

Presentations

Invited:

1. Precision diagnostics for biomarker studies, Department of Epidemiology and Biostatistics, Mel and Enid Zuckerman College of Public Health, University of Arizona, Tucson, AZ, 04/2023
2. Estimation of disease progression rate using longitudinal surrogate outcomes in non-randomized validation subsample, Conference on Lifetime Data Science, Storrs, CT, 06/2017
3. Isotonic proportional hazards models with its application to clinical trial data, Center for Drug Evaluation Research, Food and Drug Administration, Silver Spring, DC, 01/2016
4. Order restricted inference in hazards regression models with application to clinical trial data, National Institute of Environmental Health Sciences, National Institutes of Health, Durham, NC, 10/2015

Contributed:

5. Statistical challenges in investigating the effect of Busulfan delivered by targeted pharmacokinetics in Phase I oncology trial, International Conference on Advances in Interdisciplinary Statistics and Combinatorics, Greensboro, NC, 10/2014
6. Partial likelihood estimation of isotonic proportional hazards model, Eastern North American Region of the International Biometric Society, Miami, FL, 03/2015
7. Shape restricted additive hazards models, Eastern North American Region of the International Biometric Society, Washington, DC, 03/2017
8. A deep learning approach to gene interaction prediction, The Statistical and Applied Mathematical Sciences Institute, Durham, NC, 08/2019
9. Personalized diagnostic rule for NAPPA, Arizona Wellbeing Commons Conference, Phoenix, AZ, 09/2019
10. Evaluation of biomarkers for heterogeneous case-control studies, Joint Statistical Meetings, Seattle, WA, 08/2021
11. Order-restricted survival analysis with applications to optimal dose-finding in phase I oncology trials, Duke-Industry Statistics Symposium, Durham, NC, 03/2023
12. Precision diagnostics for cancer biomarker research, Stat4Onc Annual Symposium, Knight Cancer Center, Oregon Health Science & University, Portland, OR, 05/2023
13. Estimation of linear personalized diagnostics rules, Eastern North American Region of the International Biometric Society, Baltimore, MD, 03/2024

Software Developed

Developed R packages available on the comprehensive R archive network (CRAN):

1. **Chung, Y.**, coxphm: Cox proportional hazards models missing survival times.
2. **Chung, Y.**, varoc: value added receiver operating characteristics curve.
3. **Chung, Y.**, persDx: personalized diagnostics rules for subgroup identification and precision diagnostics.
4. **Chung, Y.**, aisoph: additive isotonic proportional hazards model.
5. **Chung, Y.**, isoSurv: isotonic regression with survival data.
6. **Chung, Y.**, surrosurvROC: surrogate survival receiver operating characteristics curve.
7. **Chung, Y.**, uniah: unimodal additive hazards model.

Patents

Filed through ASU SkySong (there are no first/lead inventors):

1. **Chung, Y.** with LaBaer, J., Qiu, J. and Song, L. Novel antibodies for detecting gastric cancer, 09/2019
2. **Chung, Y.** with LaBaer, J., Qiu, J. and Song, L. Novel biomarkers for Epstein-Barr Virus-associated gastric cancer detection, 10/2019
3. **Chung, Y.** with LaBaer, J., Qiu, J. and Shome, M. Methods for diagnosing gastric intestinal metaplasia, 05/2022
4. **Chung, Y.** with LaBaer, J., Leighton, J., Qiu, J., Shome, M., and Song, L. Anti-microbial antibody signatures of inflammatory bowel disease and uses thereof, 08/2022
5. **Chung, Y.**, J., Qiu, J., Shome, M. and Song, L. Anti-microbial antibody signatures related to lung tumors and uses thereof, 08/2022
6. **Chung, Y.** with Chavan, R., LaBaer, J., Park, J., Qiu, J. and Shome, M. Autoantibodies for identification of false positives of disease and uses thereof, 05/2023
7. **Chung, Y.** with Shome, M., Chavan, R., Park, J., Qiu, J. and LaBaer, J. Autoantibodies, kits, and methods of verifying diagnostic results, 05/2023

Teaching at ASU (unless stated otherwise)

Courses Taught

BST 601: BST 601: Biostatistical Theory and Inference (Graduate)

2024 Fall On-ground 9 students

BMI 517: Advanced Biostatistics for Biomedical Research and Health Care (Graduate)

2024 Spring Hybrid 11 students

2023 Spring Hybrid 12 students

2022 Spring Hybrid 10 students

BMI 515: Applied Biostatistics in Medicine and Informatics (Graduate)

2023 Fall Hybrid 29 students

2022 Fall Hybrid 23 students

2021 Fall On-ground 27 students

2020 Fall ASU Sync 14 students

BMI 211: Modelling Biomedical Decisions (Undergraduate)

2021 Spring ASU Sync 22 students

2020 Spring On-ground 25 students

2019 Spring On-ground 19 students

HCD 300: Biostatistics (Undergraduate)

2019 Fall On-ground 25 students

Biostatistics Seminars

Analysis of ASU's COVID-19 serological survey data, College of Health Solutions, 2022

Practical statistics for graduate studies, Biodesign Institute, 2021

Biomarker evaluation using receiver operating characteristics curve, Biodesign Institute, 2020

Fundamental of biostatistics, Bioinformatics Core, 2019

Guest Lectures

Survival analysis for BMI 461: Advanced topics in biomedical informatics I, 2018

Survival analysis for BIOS 600: Principles of statistical inference, University of North Carolina at Chapel Hill, NC, 2012

Teaching Assistant

BIOS 600: Principles of statistical inference, University of North Carolina at Chapel Hill, NC, 2012

Course Development

BST 601: Biostatistical Theory and Inference, 2024 Fall

Mentoring

Chair, Dissertation or Thesis Committee

PhD:

Yaliang Zhang, Statistics (co-advised by McCulloch), Bayesian treed machine learning with applications to personalized predictions and disease diagnosis, 2024

Ryan Fowers, Biomedical Informatics (co-advised by Stecher), Detecting behavioral patterns for understanding long-term health behavior maintenance, 2023

Master's:

Cayden Goeringer, Biological Data Science (co-advised by Broatch), Meta-analysis for multi-cancer early detection biomarker discovery, 2024

Nishtha Shah, Computer Science (co-advised by Lee), Tree-guided personalized machine learning with application to precision diagnostics, 2023

Undergraduate:

Danielle Brister, Barrett, the Honors College, Evaluating biomarkers for heterogeneous diseases: from receiver operating characteristics curves to jittered dot plot and averaged above mean difference analysis, 2021

Member, Dissertation or Thesis Committee

PhD:

Ruoqian Liu, Statistics, Ongoing

Meredith Abrams, Biomedical Informatics, Ongoing

Shalini Sivanandam, Biomedical Informatics, 2023

Mariah Sullivan, Exercise & Nutritional Science, 2022

Robert Yao, Biomedical Informatics, 2018

Master's:

Tianchen Mu, Computer Science, 2023

Director, Applied or Capstone Projects

Master's:

Radiya Imran, Statistics, 2024-present

Akshaya Gunasekaran, Biomedical Informatics, 2024

Sayantani Mukherjee, Biomedical Informatics, 2024

Shilpa Baskaran, Biomedical Informatics – BMI 593, 2023

Ryan Hayden, Statistics, 2022-2023

Iphsa Banerjee, Biomedical Informatics, 2021

Surya Tenneti, Computer Science, 2020

Ketan Patil, Computer Science, 2019

Aditya Sharma, Computer Science, 2018-2020

Undergraduate:

Mohamad Sadaat, Biomedical Informatics – BMI 482/483, 2022-2023

Rohit Nandakumar, Barrett Honors College – Honors Enrichment Contract, 2020

Alvi Habib, Computer Science, 2020

Alisha Thomas, Biomedical Informatics, 2019

Supervisor, Staff Statistician

Stacy Williams, MS, 2019-2024

Paul Maranian, MS, 2018

Service

College of Health Solutions, ASU

Tenure-Track Ad Hoc Review Committee

2023 Spring Member

2020 Spring Member

Faculty Hiring Committee

2024 Spring Member, Biostatistics Faculty Search

2022 Spring Member, Biostatistics Faculty Search

2021 Spring Member, Biostatistics Faculty Search

2020 Spring Member, Biomedical Informatics Faculty Search

Faculty Service Committee

2019 Spring Member

Peer Teaching Evaluation

2023 Spring Reviewer

2022 Spring Reviewer

2020 Fall Reviewee

Biomedical Informatics Program, College of Health Solutions, ASU

Admission Committee

2022 Fall-2024 Spring Chair

2020 Spring-2022 Spring Member

Academic Program Committee

2023 Spring Member

2018 Fall-2019 Spring Member

PhD Comprehensive and Oral Exam Committee

2020 Fall-Present Member

Biomedical Informatics & Diagnostics Research Symposium

2020 Spring Poster Judge

Biostatistics Program, College of Health Solutions, ASU

Admission Committee

2024 Spring Chair

Professional Service

Sigma Xi, The Scientific Research Honor Society

2023 Spring Judge, Research Showcase for High School Students

2021 Spring Judge, Research Showcase for High School Students

Early Detection Research Network (EDRN) Statistical Working Group, National Cancer Institute

2022 Fall-present Member

Ad hoc Journal Reviewer

Biometrics; Computer Methods and Programs in Biomedicine; Multidisciplinary Digital Publishing Institute; Journal of the American Medical Informatics Association; Journal of Biomedical Informatics; Journal of Computational and Graphical Statistics; Journal of the American Statistical Association; Journal of the Royal Statistical Society: Series B; Stat; Statistics in Biosciences; Statistical Computation and Simulation; The Annals of Applied Statistics; The R Journal