Tiansheng Wang

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ACADEMIC APPOINTMENTS

- **Assistant Professor, Presidential Frontier Faculty** **2025 Sep-**
  Department of Pharmaceutical Health Outcome and Policy, University of Houston, College of Pharmacy
- **Adjunct Assistant Professor** **2025 Oct-**
  Department of Epidemiology, University of North Carolina at Chapel Hill, Gillings School of Global Public Health
- **Postdoctoral Scholar** **2022-2025**
  Department of Epidemiology, University of North Carolina at Chapel Hill, Gillings School of Global Public Health
- **Lecturer** **2011-2016**
  Dept. of Pharmacy Administration & Clinical Pharmacy, Peking University School of Pharmaceutical Sciences, China

EDUCATION

- **Ph.D., Epidemiology, minor in biostatistics,** University of North Carolina at Chapel Hill **2022**
  Advisor: Prof Til Stürmer. Dissertation: Using Machine Learning Techniques to Identify and Assess Heterogeneous Treatment Effects in Adults with Type 2 Diabetes
- **Pharm.D.,** North Dakota State University **2008**
- **M.S., Pharmaceutical Sciences,** North Dakota State University **2006**
  Advisor: Prof Stefan Balaz. Thesis: Extensions of Receptor Site Models for Ionization and Disposition
- **B.S., Pharmaceutical Sciences,** Shenyang Pharmaceutical University, China **2004**

CLINICAL EXPERIENCE

- **Full-time Pharmacist**, Rite Aid, Covington, Washington, USA **2009-2010**

LICENSURE & CERTIFICATIONS

Pharmacist license (PH60080213), Washington, USA 2009-2027

FUNDING

Current

Co-Investigator, NIDDK 1R03DK145927-01A1 (PI: Kaitlin Love)
9/1/2026 – 5/31/2027 UH Subaward: $12,942
These proposed studies will fill a knowledge gap regarding GLP-1 medicine, metformin, and phentermine weight loss efficacy, kidney outcomes, and safety in T1D.

Co-Principal Investigator, John S. Dunn Foundation Collaborative Research Award #000194386 (MPI: Tiansheng Wang & Jeannie Chin)
9/1/2026 – 8/31/2028 Total Award: $100,000
This project will test whether widely used sleep-focused medications reduce dementia risk or progression. We will combine Alzheimer's mouse models with Medicare data to examine effects on sleep and brain disease, new dementia diagnoses, and dementia-related emergency visits or hospitalizations.

Principal Investigator, Alzheimer's Association and NACC New Investigators Awards Program NIAP25-1445852
1/1/2026 – 1/31/2027 $148,445
This study aims to address these gaps by integrating neuroimaging, genetic, and real-world data and applying robust pharmacoepidemiologic study designs and cutting-edge neuroimaging techniques in UK Biobank and NACC's Uniform Data Set and Neuropathology Data Set.

Past

Principal Investigator, American Diabetes Association Precision Medicine Postdoctoral Fellowship Award 4-22-PDFPM-06
4/1/2022 – 4/1/2025 $192,444
To conduct machine learning-based precision medicine analyses in Medicare beneficiaries with type 2 diabetes initiating SGLT2 inhibitors vs. GLP-1 receptor agonists on hospitalization of heart failure and major cardiovascular outcome; and develop causal machine learning methods for heterogeneous treatment effects assessment.

PEER-REVIEWED PAPERS & PREPRINT (*corresponding author, ORCID: 0000-0002-0980-8896)

Google Scholar page: https://scholar.google.com/citations?user=JYtT5K8AAAAJ&hl=en

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87. Li D, Xu Q, Li L, **Wang T**, Liang M, Liu M. ATHENA: Knowledge-guided agentic neural architecture search for AutoFormer-based electronic health record modeling. arXiv. 2026; arXiv:2608.21712. https://arxiv.org/abs/2608.21712

86. Her QL, Stürmer T, Glynn R, Duchesneau E, **Wang T**, Poole C, Lund J, Webster-Clark M. Adapting the prevalent new-user study design and clone-censor-weighting approach to evaluate drug discontinuation. Am J Epidemiol. (In press).

85. Tang H, Wolk DA, Ying GS, **Wang T**, DeKosky ST, Chen Y. Vision Impairment, Vision Correction, and Dementia Risk in Mild Cognitive Impairment. J Am Geriatr Soc 2026. (In press).

84. Xu Y, Maas CCHM, Huang T, **Wang T**, Créon A, Sjölander A, Fu EL, Carrero JJ. Heterogeneous Treatment Effects of GLP-1RA on Kidney Outcomes in Patients with Type 2 Diabetes. Kidney Int. 2026 Jul 24:S0085-2538(26)00612-5. doi: 10.1016/j.kint.2026.06.041. Epub ahead of print. PMID: 42498061.

83. Lai Y, Her QL, Zhang Y, Xu H, Kucharska-Newton AM, Ji D, Wu G, Garden Stürmer T, **Wang T***, Xu Y*. The heterogeneous treatment effects of statins on dementia: a target trial emulation with causal machine learning using integrated genetic and real-world data. *Alzheimer's & Dementia*. 2026;22:e71178

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82. Stürmer T, **Wang T**. Active Comparator New User Cohort Studies and Matching. *JAMA Internal Medicine 2025* Nov 10. doi: 10.1001/jamainternmed.2025.5792.

81. Acheampong CO, Buse JB, Klein KR, Kim LT, Evron J, Kahkoska AR, Thompson CA, **Wang T**, Pate V, Leese P, Stürmer T. Investigating the association between incretin-based therapies and thyroid cancer incidence among US Medicare beneficiaries with diabetes. BMJ Open Diabetes Research & Care. 2025 Oct 6;13(5):e005090. doi: 10.1136/bmjdrc-2025-005090.

80. Guo J, **Wang T**, Liu Z, Zeng W, Shen P, Sun Y, Zhan S, Xu Y. Estimating cardiovascular effects of influenza vaccination in older adults: a target trial emulation using proximal causal inference. *eClinicalMedicine*. 2025 Aug 21;87:103449.

79. Her QL, **Wang T**, Stürmer T, Buse JB, Jonsson-Funk M, Webster-Clark M. Suicidality among overweight and obese patients after semaglutide exposure in a United States commercial insurance population: a real-world study. *Diabetes Obes Metab. 2025 Nov;27(11):6178-6187. doi: 10.1111/dom.70002.*

78. **Wang T**, Pate V, Kim DH, Power MC; Garden G, Palta P, Knopman D, Jonson-Funk M, Stürmer T, Kucharska-Newton AM. Developing A Novel Algorithm to Identify Incident and Prevalent Dementia in Medicare Claims for Pharmacoepidemiologic Studies. The ARIC Study. *Am J Epidemiol 2025* Dec 2;194(12):3537-3548.

77. **Wang T***, Wang J, Kinlaw AC, Wyss R, Pate V, Gou Z, Buse JB, Keet CA, Kosorok MR, Stürmer T. Glucagon-like Peptide 1 Receptor Agonists in Asthma Exacerbations: an Application of High-dimensional Iterative Causal Forest to Identify Subgroups. *Pharmacoepidemiol Drug Saf.* 2025; 34:e70192.

76. **Wang T***, Pate V, Wyss R, Buse JB, Kosorok MR, Stürmer T. A Novel High Dimensional Approach to Assess Heterogeneous Treatment Effect in Claims Data. *Am J Epidemiol 2025. 2025 Oct 7;194(10):2915-2927. doi: 10.1093/aje/kwaf127.*

75. Zeng W, **Wang T**, Stürmer T, He N, Shen P, Lin H, Guan X, Xu Y. Comparative effectiveness of angiotensin-converting enzyme inhibitors and angiotensin II receptor blockers on cardiovascular outcomes in older adults with type 2 diabetes mellitus: a target trial emulation study. *Cardiovasc Diabetol*. (2025) 24:194

74. **Wang T**, Wang J, Song Z, Miller E, Pate V, Her Q, Yang J, Charlier SHR, Egger P, Barnes EL, Buse JB, Becker C, Sandler RS, Meier C, Jick S, Stürmer T. Caution in Handling Switchers in Pharmacoepidemiologic Studies Estimating Treatment Effects: The Example of Dipeptidyl Peptidase-4 Inhibitors and Inflammatory Bowel Disease. *Am J Epidemiol. 2026 Mar 5;195(3):768-782.*

73. Guo J, **Wang T**, Cao H, Ma Q, Tang Y, Li T, Wang L, Xu Y, Zhan S. Application of methodological strategies to address unmeasured confounding in real-world vaccine safety and effectiveness study: a systematic review*. J Clin Epidemiol. 2025* May;181:111737. doi: 10.1016/j.jclinepi.2025.111737.

72. Ji D, Dong S, **Wang T**, Wei J, Shen P, Lin H, Shi L, Guang X, Yang X. Statin Use and Risk of Intracerebral Hemorrhage in Chinese Population: A Target Trial Emulation Study. *Neurology*. 2025. Apr 22;104(8):e213489.

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71. **Wang T**, Ji D, Stürmer T, Ismail S, Dong S, Shen P; Lin H; Shi L, Guan X, Xu Y. The Effect of Sodium Glucose Cotransporter-2 Inhibitors on Hemoglobin A1C Variability and Acute Kidney Injury: A Causal Mediation Analysis. *Pharmacoepidemiol Drug Saf.* 2024 Aug;33(8):e5876. (**Cover Image**: https://onlinelibrary.wiley.com/doi/abs/10.1002/pds.70039)

70. **Wang T***, Keil AP, Buse JB, Keet C, Kim S, Wyss R, Pate V, Jonsson-Funk M, Pratley RE, Kvist K, Kosorok MR, Stürmer T. Glucagon-like Peptide 1 Receptor Agonists and Asthma Exacerbations: Which Patients Benefit Most? *Ann Am Thorac Soc*. 2024 Jul 16. doi: 10.1513/AnnalsATS.202309-836OC.

69. **Wang T***, Pate V, Wyss R, Buse JB, Kosorok MR, Stürmer T. High-dimensional Iterative Causal Forest (hdiCF): a Novel Algorithm for Subgroup Identification in Claims Data. *Am J Epidemiol. 2024 Sep 5;194(7):2085–97.*

68. **Wang T**, Keil AP, Kim S, Wyss R, Htoo PT, Funk MJ, Buse JB, Kosorok MR, Stürmer T. Iterative Causal Forest: A Novel Algorithm for Subgroup Identification. *Am J Epidemiol. 2024 May 7;193(5):764-776*

67. Her QL, Dejene SZ, Ismail S, **Wang T**, Jonsson-Funk M, Pate V, Min JY, Flory J. Validation of an International Classification of Disease, Tenth Revision, Clinical Modification (ICD-10-CM) algorithm in identifying severe hypoglycemia events in large health care databases. *Diabetes Obes Metab*. 2024 Apr;26(4):1282-1290.

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66. Wei J, Xu H, Zhang D, Tang H, **Wang T**, Steck SE, Divers J, Zhang J, Merchant AT. Initiation of Antihypertensive Medication from Midlife on Incident Dementia: The Health and Retirement Study Journal of Alzheimer's Disease. *J Alzheimers Dis. 2023 Jul 5. doi: 10.3233/JAD-230398.*

65. Wei J, Xu H, Liese A, Merchant A, Wang L, Yang CH, Lohman M, Brown M, **Wang T**, Friedman D. The 10-Year Cardiovascular Disease Risk Score and Cognitive Function among Older Adults: The National Health and Nutrition Examination Survey 2011-2014. *J Am Heart Assoc. May 30, 2023 Jun 6;12(11):e028527.*

64. Li X, Zhou L, Gaggl M, Kinlaw AC, Gou Z, Yang X, Wei J, **Wang T***. Remdesivir for COVID-19 and Acute Kidney Injury: Disproportionality Analysis of Data from the U.S. Food and Drug Administration Adverse Event Reporting System. *Int J Clin Pharm*. 2023 Apr;45(2):509-514

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63. Htoo PT, Buse JB, Cavender M, **Wang T**, Pate V, Edwards J, Stürmer T. Comparative cardiovascular effects of sodium glucose cotransporter-2 inhibitors and glucagon like peptide-1 receptor agonists in older patients with diabetes with varying cardiovascular risk profiles: a cohort study. *J Am Heart Assoc.* 2022 Feb 15;11(4):e022376.

62. Zhao Y, Zhang J, Zheng K, Thai S, Simpson RJ, Kinlaw AC, Xu Y, Wei J, Cui X, Buse JB, Stürmer T, **Wang T***. Serious Cardiovascular Adverse Events Associated with Hydroxychloroquine/chloroquine Alone or with Azithromycin in Patients with COVID-19: A pharmacovigilance analysis of FDA Adverse Event Reporting System (FAERS). *Drugs - Real World Outcomes.* 2022 Jun;9(2):231-241.

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61. Webster-Clark M, Stürmer T, **Wang T**, Man K, Marinac-Dabic D, Rothman KJ, Ellis AR, Gokhale M, Lunt M, Girman C, Glynn RJ. Using propensity scores to estimate effects of treatment initiation decisions: State of the science. *Stat Med.* 2021 Mar 30;40(7):1718-1735.

60. Guo M, Thai S, Zhou J, Wei J, Zhao Y, Xu W, **Wang T***, Cui X. Evaluation of Rivaroxaban, Apixaban and Dabigatran-Associated Hemorrhagic Events Using the FDA-Adverse Event Reporting System (FAERS) Database. *Int J Clin Pharm* 2021 Jun 9. doi: 10.1007/s11096-021-01273-8.

59. Tang H, Zhou L, Li X, Kinlaw AC, Yang JY, Moon AM, Barnes EL, **Wang T**. Drug-induced liver injury associated with lopinavir-ritonavir in patients with COVID-19: a disproportionality analysis of U.S. food and drug administration adverse event reporting system (FAERS) data. *Int J Clin Pharm* 2021. Aug;43(4):1116-1122.

58. Wei J, Ali MK, **Wang T**, Xu H. Abdominal aortic calcification and cognitive function among older adults: Cross-sectional analysis of National Health and Nutrition Examination Survey, 2013-2014. *Int J Geriatr Psychiatry*. 2021 Nov;36(11):1778-1784.

57. Wei J, Hou R, Xie L, Chandrasekar EK, Lu H, **Wang T**, Li C, Xu H. Sleep, sedentary activity, physical activity, and cognitive function among older adults: The National Health and Nutrition Examination Survey, 2011-2014. *J Sci Med Sport*. 2021 Feb;24(2):189-194.

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56. Stürmer T, **Wang T**, Golightly YM, Keil A, Lund JL, Jonsson Funk M. Methodological Considerations When Analyzing and Interpreting Real-world Data. *Rheumatology* 2020;59:1425

55. Xu Y, **Wang T**, Yang Z, Lin H, Shen P, Zhan S. Sulphonylureas monotherapy and risk of hospitalization for heart failure in patients with type 2 diabetes mellitus: A population-based cohort study in China. *Pharmacoepidemiol Drug Saf* 2020 Jun;29(6):635-643.

54. Yang JY, **Wang T**, Pate V, Buse JB, Stürmer T. Real-World Evidence on Sodium-Glucose Cotransporter-2 Inhibitor Use and Risk of Fournier's Gangrene. *BMJ Open Diabetes Research & Care* 2020. 2020;8:e000985.

53. Li D, Silvester JA, Crowley MJ, Yang JY, Alexopoulos AS, Xu Y, Zhan S, **Wang T***. Assessing the association between dipeptidyl peptidase-4 inhibitors use and celiac disease through drug adverse event reporting. *Ther Adv Chronic Dis* 2020, Vol. 11: 1–3

52. Lu W, Sun S, Wei J, Thai S, Li D, Tang H, **Wang T**, Sun L. Dipeptidyl peptidase-4 inhibitors and risk of venous thromboembolism: data mining of FDA adverse event reporting system. *Int J Clin Pharm.* 2020 Oct;42(5):1364-1368.

51. Zhao M, Sun S, Huang Z, **Wang T**, Tang H. Network Meta-Analysis of Novel Glucose-Lowering Drugs on Risk of Acute Kidney Injury. *Clin J Am Soc Nephrol*. 2020 Dec 31;16(1):70-78.

50. Xin L, Sun S, Wang J, Lu W, **Wang T**, Tang H. Dipeptidyl Peptidase 4 Inhibitors and Venous Thromboembolism Risk in Patients with Type 2 Diabetes: A Meta-analysis of Cardiovascular Outcomes Trials. *Thromb Haemost.* 2020;10.1055/s-0040-1715444.

49. Li D, Wu T, **Wang T**, Wei H, Wang A, Tang H, Song Y. Effects of sodium glucose cotransporter 2 inhibitors on risk of dyslipidemia among patients with type 2 diabetes: A systematic review and meta-analysis of randomized controlled trials. *Pharmacoepidemiol Drug Saf* 2020 May;29(5):582-590.

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48. Wang T, Yang YJ, Buse JB, Pate V, Tang H, Barnes EL, Sandler RS, Stürmer T. Dipeptidyl Peptidase-4 Inhibitors and Risk of Inflammatory Bowel Disease: Real World Evidence in US Adults. *Diabetes Care* 2019 Nov;42(11):2065-2074.

47. Yang JY, **Wang T**, Pate V, Gower EW, Crowley MJ, Buse JB, Stürmer T. Sodium-Glucose Cotransporter-2 Inhibitor Use and Risk of Lower-Extremity Amputation: Evolving Questions, Evolving Answers. *Diabetes Obes Metab*. 2019 May;21(5):1223-1236.

46. Wang T*, Lu W, Tang H, Buse JB, Stürmer T, Gower EW. Assessing the Association Between GLP-1 Receptor Agonist Use and Diabetic Retinopathy Through the FDA Adverse Event Reporting System. *Diabetes Care* 2019 Feb;42(2):e21-e23.

45. Wang T*, Lu W, Li D, Yang JY, Tang H, Buse JB, Stürmer T. Assessing the Association between Dipeptidyl Peptidase-4 Inhibitors Use and Inflammatory Bowel Disease Through Drug Adverse Event Reporting. *Diabetes Care* 2019 Jun;42(6):e89-e91.

44. Wei J, Xie L, Song S, **Wang T**, Li C. Isotemporal substitution modeling on sedentary behaviors and physical activity with depressive symptoms among older adults in the U.S.: The national health and nutrition examination survey, 2007-2016. *J Affect Disord.* 2019 Jul 5;257:257-262.

43. Wei J, Ying M, Xie L, Chandrasekar EK, Lu H, **Wang T**, Li C. Late-life depression and cognitive function among older adults in the U.S.: The National Health and Nutrition Examination Survey, 2011-2014. *J Psychiatr Res.* 2019 Apr;111:30-35.

42. Li G, Crowley M, Tang H, Yang JY, Sander RS, **Wang T***. Dipeptidyl peptidase-4 inhibitors and risk of inflammatory bowel disease among patients with type 2 diabetes: a meta-analysis of randomized controlled trials. *Diabetes Care*. 2019 Jul;42(7):e119-e121.

41. Wang A, Yang K, **Wang T**, Zhang N, Tang H, Feng X. Effects of sodium-glucose cotransporter 2 inhibitors on risk of venous thromboembolism in patients with type 2 diabetes: A systematic review and meta-analysis. *Diabetes Metab Res Rev.* 2019;e3174.

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40. Wei J, Hou R, Kowalski A, **Wang T**, et al. The Association and Dose-Response Relationship between Dietary Intake of Alpha-Linolenic Acid and Risk of Coronary Heart Disease: A Systematic Review and Meta-Analysis of Cohort Studies. *Br J Nutr* 2018 Jan;119(1):83-89.

39. Wang T, Hong J-L, Gower EW, Pate V, Garg S, Buse JB, Stürmer T. Incretin-based Therapies and Diabetic Retinopathy: Real World Evidence in Older US Adults. *Diabetes Care* 2018 Sep;41(9):1998-2009.

38. Li X, Thai S, Lu W, Sun S, Tang H, Zhai S, **Wang T***. Traditional Chinese medicine and drug-induced anaphylaxis: data from the Beijing pharmacovigilance database. *Int J Clin Pharm*. 2018 Aug;40(4):921-927.

37. Zhao Y, Lu H, Thai S, Li X, Tang H, Hui J, Zhai S, Sun L, **Wang T***. Development and validation of an algorithm to identify drug-induced anaphylaxis in the Beijing Pharmacovigilance Database. *Int J Clin Pharm* 2018 Aug;40(4):862-869.

36. Xing Y, Zhang H, Sun S, Ma X, Pleasants R, Tang H, Zheng H, Zhai S, **Wang T***. Clinical features and treatment of pediatric patients with drug-induced anaphylaxis: a study based on pharmacovigilance data. *Eur J Pediatr* 2018 Jan;177(1):145-154.

35. Zhao Y, Sun S, Li X, Ma X, Tang H, Sun L, Zhai S, **Wang T***. Drug-induced anaphylaxis in China: a 10 year retrospective analysis of the Beijing Pharmacovigilance Database. *Int J Clin Pharm* 2018 Oct;40(5):1349-1358.

34. Zhao Y, **Wang T**, Li G, Sun S. Pharmacovigilance in China: development and challenges. *Int J Clin Pharm.* 2018 2018 Aug;40(4):823-831.

33. Tang H, Li G, Zhao Y, Wang F, Gower EW, Shi L, **Wang T***. Comparisons of diabetic retinopathy events associated with glucose-lowering drugs in patients with type 2 diabetes mellitus: a network meta-analysis. *Diabetes Obes Metab.* 2018 May;20(5):1262-1279.

32. Li D, Shi W, **Wang T**, Tang H. SGLT2 inhibitor plus DPP-4 inhibitor as combination therapy for type 2 diabetes: A systematic review and meta-analysis. *Diabetes Obes Metab.* 2018 Aug;20(8):1972-1976.

31. Tang H, Shi W, Fu S, **Wang T**, Zhai S, Song Y, Han J. Pioglitazone and bladder cancer risk: a systematic review and meta-analysis. *Cancer Med.* 2018 Apr;7(4):1070-1080.

30. Li D, Yang JY, **Wang T**, Shen S, Tang H. Risks of diabetic foot syndrome and amputation associated with sodium glucose co-transporter 2 inhibitors: A Meta-analysis of Randomized Controlled Trials. *Diabetes & Metabolism* 2018. Nov;44(5):410-414.

29. Pleasants RA, **Wang T**, Xu X, et al. Nebulized Corticosteroids in the Treatment of COPD Exacerbations: Systematic Review, Meta-Analysis, and Clinical Perspective. *Respir Care*. 2018 Oct;63(10):1302-1310.

28. Cui JY, Zhou RR, Han S, **Wang T**, Wang LQ, Xie XH. Statin therapy on glycemic control in type 2 diabetic patients: A network meta-analysis. *J Clin Pharm Ther.* 2018 Aug;43(4):556-570.

27. Wang X, Li M, Wang M, Cui S, Shi L, **Wang T***. The use of mobile messaging-based case studies in a pharmacotherapy introduction class in China*. J Comput Assist Learn.* 2018; 34:526–533.

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26. Wang T, Ma X, Xing Y, Sun S, Zhang H, Stürmer T, et al: Use of epinephrine in patients with drug-induced anaphylaxis: an analysis of the Beijing pharmacovigilance database. *Int Arch Allergy Immunol* 2017 May 16; 173(1): 51–60.

25. Tang H, Li D, Zhang J, Li Y, **Wang T**, Zhai S, Song Y. Sodium–glucose cotransporter 2 inhibitors and risk of adverse renal outcomes among type 2 diabetes patients: a network and cumulative meta-analysis of randomized controlled trials. *Diabetes Obes Metab.* 2017 Aug;19(8):1106-1115.

24. Liu Y, Li J, **Wang T**, Wang Y, Zhao L, Fang Y. The effect of genistein on glucose control and insulin sensitivity in postmenopausal women: A meta-analysis. *Maturitas* 2017 Mar;97:44-52.

23. Li D, **Wang T**, Shen S, Fang Z, Dong Y, Tang H. Urinary tract and genital infections in patients with type 2 diabetes treated with sodium-glucose cotransporter 2 inhibitors: a meta-analysis of randomized controlled trials. *Diabetes Obes Metab* 2017 Mar;19(3):348-355.

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21. Tang H, Li D, **Wang T**, Zhai S, Song Y. Effect of Sodium–Glucose Cotransporter 2 (SGLT2) Inhibitors on Diabetic Ketoacidosis among Type 2 Diabetes Patients: A Meta-analysis of Randomized Controlled Trials. *Diabetes Care* 2016 Aug;39(8):e123-4

20. Tang H, Li D, Zhang J, Hsu Y, **Wang T**, Zhai S, Song Y. Lack of Evidence for a Harmful Effect of Sodium–Glucose Cotransporter 2 (SGLT2) Inhibitors on Fracture Risk among Type 2 Diabetes Patients: A Network and Cumulative Meta-Analysis of Randomized Controlled Trials. *Diabetes Obes Metab.* 2016 Dec;18(12):1199-1206.

19. Liu F, Wang HM, **Wang T**, Zhang YM, Zhu X. The efficacy of thymosin α1 as immunomodulatory treatment for sepsis: a systematic review of randomized controlled trials. *BMC Infectious Diseases* 2016 Sep 15;16:488.

18. Tang H, Fang Z, **Wang T**, Cui W, Zhai S, Song Y. Meta-Analysis of Effects of Sodium-Glucose Cotransporter 2 (SGLT2) Inhibitors on Cardiovascular Outcomes and All-Cause Mortality among Patients with Type 2 Diabetes Patients. *Am J Cardiol.* 2016 Dec 1;118(11):1774-1780.

17. Li X, Yu C, **Wang T**, Tang H. Effect of cytochrome P450 2C19 polymorphisms on the clinical outcomes of voriconazole: A systematic review and meta-analysis. *Eur J Clin Pharmacol.* 2016 Oct;72(10):1185-1193.

16. Zhou J, Ma X, **Wang T**, Zhai S. Comparative efficacy of bisphosphonates in short-term fracture prevention for primary osteoporosis: a systematic review with network meta-analyses. *Osteoporos Int* 2016 Nov;27(11):3289-3300.

15. Li J, Liu Y, **Wang T**, Zhao L, Feng W. Does genistein lower plasma lipids and homocysteine levels in postmenopausal women? A meta-analysis. *Climacteric* 2016 Oct;19(5):440-7.

14. Zhou J, **Wang T**, Zhao X, Miller DR, Zhai S. A Comparative Efficacy of Bisphosphonates to Prevent Fracture in Men with Osteoporosis: A Systematic Review with Network Meta-analyses. *Rheumatol Ther* 2016 Jun; 3(1): 117–128.

13. Wang T, Wang F, Zhou J, Tang H, Giovenale S. Adverse Effects of Incretin–based Therapies on Major Cardiovascular and Arrhythmia Events: Meta-analysis of Randomized Trials. *Diabetes Metab Res Rev* 2016 Nov;32(8):843-857.

12. Jin H, **Wang T***, Falcione B, et al. Trough concentration of voriconazole and its relationship with efficacy and safety: a systematic review and meta-analysis. *J Antimicrob Chemother* 2016 Jul;71(7):1772-85.

11. Pleasants R, **Wang T**, Gao J, Tang HL, Donohue J. Inhaled Umeclidinium in COPD Patients- A Systematic Review and Meta-Analysis. *Drugs* 2016 Mar;76(3):343-61.

10. Wang T, Wang F, Xin X, Pleasants R, Shi L. Methods for using microblogs for health communication with a pharmacist-based account. *Patient Educ Couns* 2016 Aug;99(8):1432-7.

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9. Wang T, Wang F, Gou Z, Tang H, Li C, Shi L, Zhai SD. Using Real World Data to Evaluate the Association of Incretin–based Therapies with Risk of Acute Pancreatitis: a Meta-analysis of 1324515 Patients from Observational Studies. *Diabetes Obes Metab* 2015 Jan;17(1):32-41.

8. Wang T, Benedict N, Olsen KM, et al. Effect of Critical Care Pharmacist's Intervention on Medication Errors: a Systematic Review and Meta-analysis of Observational Studies. *J Crit Care* 2015. Oct;30(5):1101-6.

7. Li D, **Wang T**, Shen S, Yu J, Zhang Y, Zhang C, Tang H. Effects of Fluroquinolones in Newly Diagnosed, Sputum-positive Tuberculosis Therapy: A Systematic Review and Network Meta-analysis. *PLoS ONE.* 2015 Dec 15;10(12):e0145066.

6. Tang HL, Yan YY, **Wang T**, et al. Effect of follicle-stimulating hormone receptor Asn680Ser polymorphism on the outcomes of controlled ovarian hyperstimulation: an updated meta-analysis of 16 cohort studies. *J Assist Reprod Genet* 2015 Dec;32(12):1801-10.

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5. Wang T, Gou Z, Wang F, Ma M, Zhai SD. Comparison of GLP-1 Analogues versus Sitagliptin in the Management of Type 2 Diabetes: Systematic Review and Meta-Analysis of Head-to-Head Studies. *PLoS ONE* 2014 Aug 4;9(8):e103798.

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4. Wang T, Wang F, Shi L. The use of microblog-based case studies in a pharmacotherapy introduction class in China. *BMC Med Educ* 2013 Sep 8;13:120.

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3. Yi ZM, Zhai SD, Huang S, **Wang T**, Liu F. Off-label prescriptions for adult neurological patients: a pilot survey in China. *Int J Clin Pharm.* 2012 Feb;34(1):81-7.

2. Natesan S, **Wang T**, Lukacova V, et al. Cell-QSAR: Conceptual Dissection of Receptor Binding and Intracellular Disposition in Antifilarial Activities of Selwood Antimycins. *J Med Chem* 2012 April 26; 55(8): 3699–3712.

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CONFERENCE ORAL PRESENTATION

1. Proton pump inhibitors and risk of dementia: estimating heterogeneous treatment effects using high-dimensional iterative causal forest (hdiCF) algorithm. 43rd ICPE. August 31-September 2, 2026. Milan, Italy

2. Temporal High Dimensional Propensity Score (thdPS): A Novel Approach to Improve Confounding Control by Incorporating Temporality to High Dimensional variables. 41st ICPE. August 22-26, 2025. Washington DC, USA
3. Improving confounding control by statin utilization prior to follow-up for 1-year mortality in US older adults – proof of concept. 41st ICPE. August 22-26, 2025. Washington DC, USA
4. Using High Dimensional Iterative Causal Forest (hdiCF) to Identify Subgroups with Heterogeneous Treatment Effects: Glucagon-like Peptide 1 Receptor Agonists (GLP1RA) vs Sulfonylurea (SU) on Asthma Exacerbations. 40th ICPE. August 24-28, 2024. Berlin, Germany
5. A Novel High Dimensional Approach to Assess Treatment Heterogeneity in Claims Data: Sodium-glucose Cotransporter-2 inhibitors (SGLT2i) vs Glucagon-like Peptide-1 Receptor Agonists (GLP1RA) on Hospitalized Heart Failure Risk. 40th ICPE. August 24-28, 2024. Berlin, Germany
6. High-dimensional Iterative Causal Forest (hdiCF): a Novel Algorithm for Subgroup Identification in Claims Data. 39th ICPE. August 23-27, 2023. Halifax, Nova Scotia, Canada.
7. Liraglutide as a potential drug repurposing candidate for Alzheimer's disease and related dementia: Real World Evidence. Alzheimer's Association International Conference (AAIC). July 16-20, 2023. Amsterdam, Netherlands.
8. Using Iterative Causal Forest to Identify Heterogeneous Treatment Effects: Sodium-glucose Cotransporter-2 inhibitors versus Glucagon-like Peptide-1 Receptor Agonists on Hospitalization for Heart Failure. 38th ICPE. Copenhagen, Denmark. 2022 August 25-28 (abstract 235)
9. Heterogeneous Treatment Effect of Glucagon-like Peptide 1 Receptor Agonists on Asthma/COPD exacerbation: Machine-learning Analysis of Two Nationwide Cohorts. 38th ICPE. Copenhagen, Denmark. 2022 August 25-28 (abstract 39)
10. Using Iterative Causal Forest to Identify Heterogeneous Treatment Effects: Sodium-glucose Cotransporter-2 inhibitors (SGLT2i) versus Glucagon-like Peptide-1 Receptor Agonists (GLP1RA) on Hospitalization for Heart Failure in US Older Adults. The 2022 Society for Epidemiologic Research (SER) Annual Meeting, June 15-17. Chicago, IL. (abstract 0053)
11. Multi-depth, Iterative Causal Forest for Subgroup Identification. 37th ICPE. Virtual Event. 2021 August 23-25
12. Iterative Causal Forest For Identifying Subgroups. The 2021 Society for Epidemiologic Research (SER) Annual Meeting, June 23-25. Virtual. (abstract 0450)
13. Using Machine Learning To Identify Heterogeneous Treatment Effects: DPP-4 Inhibitor Versus Sulfonylurea On Cardiovascular Outcomes In Us Medicare. 36th ICPE. Virtual Event. 2020 August 28-30 (abstract 4486)
14. Dipeptidyl Peptidase-4 Inhibitors and Risk of Inflammatory Bowel Disease: Real World Evidence in US Adults. 35th ICPE. Philadelphia, Pennsylvania, US. 2019 August 28-30.
15. Incretins and Diabetic Retinopathy: Real World Evidence for Safety. 33rd ICPE. Montreal, Canada. 2017 August 26-30.

CONFERENCE POSTER PRESENTATION

1. Wang et al. Proton pump inhibitors and risk of dementia: estimating heterogeneous treatment effects using high-dimensional iterative causal forest (hdiCF) algorithm. 42nd ICPE. August 31-September 2, 2026. Milan, Italy
2. Wang et al. Effect of GLP-1 receptor agonists on incident dementia with and without SGLT2 inhibitors 42nd ICPE. August 31-September 2, 2026. Milan, Italy
3. Wang et al. Angiotensin II Receptor Blockers and Incident Dementia: Effects With and Without Statin Use. 42nd ICPE. August 31-September 2, 2026. Milan, Italy (**Spotlight poster**)
4. Wang et al. Integrate Real-World Data and Genetics: a causal machine learning approach to assess Statin's Effect on Incident Dementia. AAIC July 27, 2025. Toronto, Canada.
5. Wang et al. Iterative Causal Survival Forest: A Novel Subgrouping Algorithm for Survival Data Allowing for Censoring. 41st ICPE. August 22-26, 2025. Washington DC, USA
6. Wang et al. Dipeptidyl Peptidase-4 Inhibitors and Inflammatory Bowel Disease Risk: Impact of Study Design Differences on Comparative Safety Results. 40th ICPE. August 24-28, 2024. Berlin, Germany
7. Wang et al. Developing a novel claim-based algorithm to identify incident and prevalent dementia using Medicare claims of the Atherosclerosis Risk in Communities (ARIC) cohort. AAIC July 31, 2024. Philadelphia, USA.
8. Wang et al. Single-cell RNA Sequencing Data-based Drug Repurposing for Alzheimer's Disease Using Gene

Expression data of ROSMAP Cohort. American Society of Human Genetics (ASHG) annual meeting. Washington, DC. November 2023.

9. Wang et al. Quantitative Structural-Activity Relationship (QSAR) Models for Multitargets of Alzheimer's Disease for Drug Repurposing. American Chemical Society (ACS) Fall 2023. San Francisco, USA. August 13-17, 2023.
10. Wang et al. Metformin and Risk of Dementia: Real World Evidence. 39th ICPE. August 23-27, 2023. Halifax, Nova Scotia, Canada.
11. Wang et al. Liraglutide and Risk of Dementia: Real World Evidence. 39th ICPE. August 23-27, 2023. Halifax, Nova Scotia, Canada.
12. Wang T, et al. Multiple Imputation of Clinical Variables in FFS Medicare Population. 34th ICPE. Prague, Czech Republic. 2018 August 28-30.

INVITED TALK

- **Oct 2026** — Regeneron HEOR-PEPI Methods Meeting. Virtual. *Applying High-Dimensional Iterative Causal Forest (hdiCF) Identify Subgroups in Real-World Data.*
- **Feb 2026** — The University of Texas at Austin, College of Pharmacy, Health Outcomes Division. Virtual. *Applying High-Dimensional Iterative Causal Forest (hdiCF) to Subgroup Identification in Real-World Data.*
- **Sep 2025** — 11th Annual UNC Center for Pharmacoepidemiology Methods Symposium. Virtual. *Use of Proximal Causal Inference to Address Unmeasured Confounding in Target Trial Emulation: Empirical Example on Influenza Vaccination and Stroke.*
- **May 2025** — University of Pittsburgh, School of Pharmacy, Department of Pharmacy and Therapeutics. *Advancing Pharmacoepidemiology into the Future: Innovating with Causal Inference and Machine Learning Techniques.*
- **Apr 2025** — University of Texas Health Science Center at Houston, McGovern Medical School, Department of Family and Community Medicine. *Advancing Pharmacoepidemiology into the Future: Innovating with Causal Inference and Machine Learning Techniques.*
- **Apr 2025** — The Ohio State University, Department of Biomedical Informatics. *Advancing Pharmacoepidemiology into the Future: Innovating with Causal Inference and Machine Learning Techniques.*
- **Feb 2025** — University of Houston College of Pharmacy, Department of Pharmaceutical Health Outcomes and Policy. *Advancing Pharmacoepidemiology into the Future: Innovating with Causal Inference and Machine Learning Techniques.*
- **Jan 2025** — Peking University Third Hospital, Department of Pharmacy, and Peking University Health Science Center, Drug Evaluation Center. *Application of Iterative Causal Forest (iCF) Causal Machine Learning in Pharmacoepidemiology.*
- **Aug 2024** — Harvard Pilgrim Health Care Institute and Harvard Medical School, Department of Population Medicine. *Advancing Pharmacoepidemiology into the Future: Innovating with Causal Inference and Machine Learning Techniques.*
- **Feb 2024** — Harvard T.H. Chan School of Public Health, Department of Epidemiology. *Advancing Pharmacoepidemiology into the Future: Innovating with Causal Inference and Machine Learning Techniques.*
- **Feb 2024** — UNC Division of Pharmaceutical Outcomes and Policy (DPOP). *High-Dimensional Iterative Causal Forest (hdiCF) for Subgroup Identification Using Health Care Claims Data.*
- **Nov 2023** — Rutgers Center for Pharmacoepidemiology and Treatment Science. *High-Dimensional Iterative Causal Forest (hdiCF) for Subgroup Identification Using Health Care Claims Data.*
- **Apr 2023** — 9th Annual UNC Center for Pharmacoepidemiology Methods Symposium. Virtual. *Evaluating Heterogeneous Treatment Effects Using Machine Learning Approaches.*
- **Apr 2023** — University of Washington, Division of Pharmaceutical Outcomes and Policy. *Using Real-World Data to Discover Novel Drug Candidates.*
- **Mar 2023** — University of Florida, Division of Pharmaceutical Outcomes and Policy. *Using Real-World Data to Discover Novel Drug Candidates.*
- **Mar 2023** — Rutgers Center for Pharmacoepidemiology and Treatment Science. *Using Real-World Data to Discover Novel Drug Candidates.*
- **Oct 2022** — 6th Huangshan International Pharmacoeconomics Forum, Anhui, China. *Using Iterative Causal*

Forest to Identify Heterogeneous Treatment Effects in Adults with Type 2 Diabetes.

- **Aug 2022** — Arnold School of Public Health, University of South Carolina. *Using Iterative Causal Forest to Identify Heterogeneous Treatment Effects.*
- **Sep 2020** — Beijing Chaoyang Hospital, Beijing, China. *Methodological Considerations When Analyzing Real-World Data for Drug Safety Assessment.*
- **Aug 2020** — Beijing Friendship Hospital, Beijing, China. *Methodological Considerations When Analyzing Real-World Data.*
- **Jul 2020** — Pharmaceutical Journal Bridge Meeting, Wuhan, China. *Using a Pharmacovigilance Database to Assess Drug Safety: An Introduction to FAERS Data.*
- **Jul 2020** — 3rd Drug Evidence-Based Evaluation Forum, Beijing, China. *Using a Pharmacovigilance Database to Assess Drug Safety: An Introduction to the Beijing Pharmacovigilance Database.*
- **Oct 2018** — 5th Annual UNC Center for Pharmacoepidemiology Methods Symposium, Philadelphia, Pennsylvania. *Multiple Imputation of Clinical Variables in a Fee-for-Service Medicare Population.*

TEACHING

University of Houston, Houston, TX, USA

- PHCA 7306 *Pharmaceutical Health Outcomes & Policy 2026*
  Class coordinator
- PHAR 5325 *Literature Evaluation* 2025: Instructor.
  One lecture on Power and. Sample Size; P2 PharmD students.

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

- EPID 765 *Methods and Issues in Pharmacoepidemiology* 2019: Teaching Assistant.
  Assisted instructor with class structure and logistics, invited 9 guest speakers, selected latest methodology papers for class discussion; ~30 students.
- PUBH 741 *Quantitative Methods for Health Care Professionals* 2020: Teaching Assistant.
  Assisted instructor teaching basic biostatistics and concepts (a core program competency), present a lecture on logistic regression, evaluate student work, and practical skills in modern pedagogy; ~50 students.
- EPID 766 Epidemiologic Research Using Healthcare Database: Guest Speaker. ~30 students.
- DPET 831 *Quantitative Methods in Clinical Research*: Guest Speaker. ~20 students.

Peking University School of Pharmaceutical Sciences, Beijing, CHINA

- *Introduction to Pharmacotherapy* 2011-2015: Co-Instructor and Coordinator.
  "Pharmacotherapy for depression, pain management, and osteoporosis"; 120 students.
- *Pharmacotherapy Case Studies* 2012-2015: Co-Instructor
  "Case studies of Irritable Bowel Syndrome and Inflammatory Bowel Disease"; over 30 students.
- *Drug Information and Pharmacoeconomics* 2012-2015: Co-Instructor
  "Introduction to Drug Information"; over 30 students.
- *Introduction to Pharmacy Practice* 2012-2015: Co-Instructor
  "Introduction to Patient Assessment" in pharmacy practice; over 30 students.
- *Specialty English in Clinical Pharmacy* 2012-2015: Co-Instructor
  "Patient Counseling" in Specialty English; over 30 students.

ACADEMIC SERVICE

Editorial consultant: *American Journal of Epidemiology 2021-2022*

Journal Reviewer:

- **General and Internal Medicine:** *Annals of Internal Medicine; JAMA Internal Medicine; BMJ; BMJ Open*

- **Epidemiology, Statistics, Pharmacoepidemiology, and Research Methods:** *American Journal of Epidemiology; Epidemiology; Pharmacoepidemiology and Drug Safety; BMC Medical Research Methodology; Statistics in Medicine*
- **Alzheimer's Disease and Dementia:** *Journal of Alzheimer's Disease; Alzheimer's & Dementia: Translational Research & Clinical Interventions*
- **Geriatrics:** *The Journals of Gerontology: Series A*
- **Diabetes and Endocrinology:** *Diabetes Care; Diabetic Medicine; Diabetes, Obesity and Metabolism; Diabetes Research and Clinical Practice; Diabetes Therapy; International Journal of Endocrinology; Diabetology & Metabolic Syndrome*
- **Other Medical and Public Health Journals:** *Allergy, Asthma & Immunology Research; Alimentary Pharmacology & Therapeutics; PLOS ONE; Public Health Nutrition; Scientific Reports; Medical Science Monitor*

HONORS

1. **2026 John S. Dunn Foundation Collaborative Research Award** (with Dr. Jeannie Chin)**.**
2. **2026 UH Clinical & Translational Research Symposium's Best Abstract Award.**
3. **2025 Alzheimer's Association & National Alzheimer's Coordination Center's New Investigators Award.**
4. **2020 The Merck-Guess Scholarship in Pharmacoepidemiology, Chapel Hill, NC, USA**
5. **2018 The 13th Science and Technology Award of Chinese Pharmaceutical Association, Beijing, China** (for my research on using Beijing Pharmacovigilance Database to assess drug safety)
6. **2017 The 12th Science and Technology Award of Chinese Pharmaceutical Association, Beijing, China** (for my research on trough concentration of vancomycin and voriconazole)
7. **2015 Outstanding Young Faculty Award, Peking University, Beijing, China,**
8. **2010 Rx Increase Achievement Award, Rite Aid, Covington, WA, USA**