
EDUCATION

- 2018-Present **UNIVERSITY OF PITTSBURGH GRADUATE SCHOOL OF PUBLIC HEALTH** Pittsburgh, PA, USA
PhD Candidate in Epidemiology, Degree Expected Spring 2022
Academic Advisor: Jian-Min Yuan, MD, PhD
Cancer Epidemiology and Prevention T32 Trainee
Cumulative Grade Point Average: 3.99
Relevant Coursework: SAS programming, Human Population Genetics, Pathophysiology Across the Lifespan, Infectious Disease Epidemiology, Chronic Disease Epidemiology, Epidemiology Methods I & II including Machine Learning and g-methods, Regression, Molecular Epidemiology, Cancer Epidemiology, GIS (geospatial analysis), Secondary Data Analysis, Grant Writing, Epidemiology of Aging, Introduction to Causal Inference, Statistics for Omics data, Cancer Biology & Therapeutics
- 2015-2018 **BOSTON UNIVERSITY** Boston, MA, USA
School of Public Health: Master of Public Health, Degree Awarded May 2018
Concentration: Epidemiology, 4+1 BS/MPH Accelerated Program
Cumulative Grade Point Average: 3.91
Relevant Coursework: Epidemiology, Biostatistics, Social and Behavioral Health, Introduction to Public Health Law, SAS programming, Genetic Epidemiology, Health Policy and Management, Public Health Law seminar, Environmental Health, Statistical Genetics, Intermediate Epidemiology
- 2012-2016 **BOSTON UNIVERSITY** Boston, MA, USA
College of Health and Rehabilitation Sciences: Sargent College
Dean's Scholarship
Magna Cum Laude
Bachelor of Science in Health Science, minor in Biology, Degree Awarded May 2016
Cumulative Grade Point Average: 3.67
Panhellenic Honor Society
Relevant Coursework: Epidemiology, Genomics, Non-Communicable Diseases, Qualitative Research, Immunology, Medical Ethics, Carcinogenesis, Healthcare Policy and Practice, Intensive Genetics, Microeconomics, Global Environmental Public Health, Cell Biology, General Chemistry I and II, Organic Chemistry I, Matlab, Calculus 1-3, Health and Disabilities Across the Lifespan, Writing 100 & 150

PROFESSIONAL ACTIVITIES

- **Committees:**
 - Doctoral Student Representative to the Curriculum Committee, Epidemiology Department, University of Pittsburgh GSPH – PhD/DrPH subcommittee (August 2019 – Present)
 - Student Liaison Committee, Epidemiology Department, University of Pittsburgh GSPH (September 2019 – Present)
 - Doctoral Student Ambassador, Epidemiology Department, University of Pittsburgh GSPH (December 2019 – Present)
- **Membership in Professional Societies:**
 - Society for Epidemiologic Research (SER): January 2020 – Present
 - American Association for Cancer Research (AACR): 2019 – Present
 - International Genetic Epidemiology Society (IGES): 2020 – Present
- **Journal Peer Review:**
 - International Journal of Cancer, August 2021 – Present

CERTIFICATIONS AND SKILLS

- **Mendelian Randomization Course, March 2021: University of Cambridge, MRC Biostatistics Unit.**
 - Course led by Stephen Burgess, PhD, author of Mendelian Randomization textbook.

- 4 half-days, three lectures and one practical each. Hackathon the last week of class to do a MR analysis in groups using Phenoscanner.
- Individual-level data and summarized data MR methods covered, including 2-stage least-squares (2SLS), Inverse-variance weighting method (IVW), and sensitivity methods such as MR-Egger, weighted median, and others. Coding in R primarily using MendelianRandomization package.
- Primary programming languages: SAS, PLINK, Unix, R
- Exposure to Stata programming and LaTeX
- Geospatial Analysis: ArcMap, Geoda
- Collaborative Institutional Training Initiative (CITI Program)
 - Biomedical Focus Human Subjects Protection Training
 - BUMC Human Subjects Protection Training: Medical Campus Biomedical Researchers Refresher
 - Boston University Medical Center HIPAA Module
 - BUMC Good Clinical Practice (GCP) Course
- Microsoft Access, Excel, Word, PowerPoint
- Electronic Data Capture (EDC) systems certifications for clinical trial data collection and monitoring
- Database creation and management in Filemaker

BIBLIOGRAPHY: PUBLICATIONS, PRESENTATIONS, AWARDS

Google Scholar profile: <https://scholar.google.com/citations?hl=en&user=u3cUuaAAAAAJ>

ORCID: <https://orcid.org/0000-0001-9515-3277>

MyNCBI Bibliography: <https://www.ncbi.nlm.nih.gov/myncbi/1X7C-hrqec11gs/bibliography/public/>

Publications (published)

- **Thomas CE**, Wang R, Adams-Haduch J, et al. Urinary Cotinine Is as Good a Biomarker as Serum Cotinine for Cigarette Smoking Exposure and Lung Cancer Risk Prediction. *Cancer Epidemiol Biomarkers Prev*. 2020;29(1):127-132. doi:10.1158/1055-9965.EPI-19-0653
- **Thomas CE**, Luu HN, Wang R, et al. Association between Dietary Tomato Intake and the Risk of Hepatocellular Carcinoma: The Singapore Chinese Health Study. *Cancer Epidemiol Biomarkers Prev*. Published online April 13, 2020. doi:10.1158/1055-9965.EPI-20-0051
- Thi-Hai Pham Y, Utuama O, **Thomas CE**, et al. High mobility group A protein-2 as a tumor cancer diagnostic and prognostic marker: a systematic review and meta-analysis. *Eur J Cancer Prev*. 2020;29(6):565-581. doi:10.1097/CEJ.0000000000000602
- Luu HN, Behari J, Goh GB-B, Wang R, Jin A, **Thomas CE**, Clemente JC, Odegaard AO, Koh WP, Yuan JM. Composite Score of Healthy Lifestyle Factors and Risk of Hepatocellular Carcinoma: Findings from a Prospective Cohort Study. *Cancer Epidemiol Biomarkers Prev*. 2021;30(2):380-387. doi:10.1158/1055-9965.EPI-20-1201
- **Thomas CE**, Luu HN, Wang R, et al. Association between Pre-Diagnostic Serum Bile Acids and Hepatocellular Carcinoma: The Singapore Chinese Health Study. *Cancers (Basel)*. 2021;13(11):2648. doi:10.3390/cancers13112648
- Yu Y-C, Luu HN, Wang R, **Thomas CE**, Glynn NW, Youk AO, Behari J, Yuan JM. Serum Biomarkers of Iron Status and Risk of Hepatocellular Carcinoma Development in Patients with Non-Alcoholic Fatty Liver Disease. *Cancer Epidemiol Biomarkers Prev*. Published online October 14, 2021:cebp.0754.2021. doi:10.1158/1055-9965.EPI-21-0754
- Wang Z, Budhu AS, Shen Y, Wong LL, Hernandez BY, Tiirikainen M, Ma X, Irwin ML, Lu L, Zhao H, Lim JK, Taddei T, Mishra L, Pawlish K, Stroup A, Brown R, Nguyen MH, Koshiol J, Hernandez MO, Forgues M, Yang HI, Lee MH, Huang YH, Iwasaki M, Goto A, Suzuki S, Matsuda K, Tanikawa C, Kamatani Y, Mann D, Guarnera M, Shetty K, **Thomas CE**, Yuan JM, Khor CC, Koh WP, Risch H, Wang XW, Yu H. Genetic susceptibility to hepatocellular carcinoma in chromosome 22q13.31, findings of a genome-wide association study. *JGH Open*. 2021;5(12):1363-1372. doi:10.1002/jgh3.12682

Publications (submitted & in preparation)

- “Non-alcoholic fatty liver disease polygenic risk score and risk of hepatocellular carcinoma in an East Asian population” – submitted.

- “Circulating serum soluble CD137 and risk of hepatocellular carcinoma: results from nested case-control studies in prospective cohorts in Shanghai and Singapore” – in preparation.
- “High levels of blood lymphocytes in relation to low risk of hepatocellular carcinoma in patients with non-alcoholic liver disease – Findings from a comprehensive analysis of electronic health records from the University of Pittsburgh Medical Center (UPMC) Healthcare System” – in preparation.

Oral Presentations

- Urinary cotinine is as good a biomarker as serum cotinine for cigarette smoking exposure and lung cancer risk prediction –UPMC Hillman Cancer Center Scientific Retreat Seminar, June 2019.
- High levels of blood lymphocytes in relation to low risk of hepatocellular carcinoma in patients with non-alcoholic liver disease – Findings from a comprehensive analysis of electronic health records from the University of Pittsburgh Medical Center (UPMC) Healthcare System –UPMC Hillman Cancer Center Scientific Retreat, presentation representing the Cancer Epidemiology and Prevention research program, Soldiers & Sailors Memorial, October 12th, 2021.

Awards

- **Second Place Award, Population Sciences Category:** Urinary cotinine is as good a biomarker as serum cotinine for cigarette smoking exposure and lung cancer risk prediction – UPMC Hillman Cancer Center Scientific Retreat June 19th, 2019
- **Abstract Presentation Award, Cancer Epidemiology and Prevention Program:** High levels of blood lymphocytes in relation to low risk of hepatocellular carcinoma in patients with non-alcoholic liver disease – Findings from a comprehensive analysis of electronic health records from the University of Pittsburgh Medical Center (UPMC) Healthcare System –UPMC Hillman Cancer Center 33rd Annual Scientific Retreat, October 12th, 2021.

Poster Presentations

- Urinary cotinine is as good a biomarker as serum cotinine for cigarette smoking exposure and lung cancer risk prediction – Dean’s Day poster presentation April 4, 2019 at Pitt Public Health; Hillman Cancer Center Scientific Retreat poster presentation June 19th, 2019
- Association between dietary tomato intake and the risk of hepatocellular carcinoma: the Singapore Chinese Health Study – Poster Presentation at Virtual AACR Annual Meeting 2020.
- Conjugated primary bile acids as a biomarker for hepatocellular carcinoma risk in two prospective cohort studies – Poster Presentation at Virtual AACR Annual Meeting 2021.

TEACHING EXPERIENCE

May-June 2019 & 2020 **UNIVERSITY OF PITTSBURGH SCHOOL OF HEALTH AND REHABILITATION SCIENCES** Pittsburgh, PA, USA

Adjunct Professor: Primary Instructor, HIM 1462 Epidemiology

- Department of Health Information Management, HIM 1462: Epidemiology, 2 credits, Mondays 1-5pm
- 6-week long accelerated summer course for undergraduates, introduction to epidemiology: 25 students summer 2019, 16 students taught remotely via Zoom summer 2020.
- “This course will focus on the basic concepts of epidemiology and its purpose. Descriptive, analytic, and experimental epidemiological studies are some of the topics that will be explained and discussed.”
- Developed lectures from previous instructor’s material, former epidemiology courses, and original slides
- Weekly course consisting of two lectures and two in-class exercises per class
- Created and organized in-class exercises, final exam practice questions, and final exam
- Responsible for all lectures, in-class exercises, office hours, grading, critique of epidemiologic research proposal assignment, and feedback/communication with students
- Former instructor and supporting faculty: Valerie Watzlaf, PhD, MPH, RHIA, FAHIMA

- September
-Dec 2018 **UNIVERSITY OF PITTSBURGH GRADUATE SCHOOL OF PUBLIC HEALTH** Pittsburgh, PA, USA
Teaching Assistant
- Teaching assistant for introduction to epidemiology course for MPH and MS students at the Graduate School of Public Health, EPIDEM 2110 Principles of Epidemiology, taught by Thomas Songer, PhD
 - Lead recitation session for class of ~150 students about hypothesis generation, case-control, and cross-sectional research study design
 - Grade exams and homework, hold office hours 1 hour per week, and general class assistance

GRANT FUNDING

- August 2019 **UNIVERSITY OF PITTSBURGH & UPMC HILLMAN CANCER CENTER** Pittsburgh, PA, USA
 -Present ***Predocctoral Scholar on Translational Research Training in Cancer Etiology and Prevention, 2T32CA186873-01***

RESEARCH EXPERIENCE

- September
2018-Present **UNIVERSITY OF PITTSBURGH & UPMC HILLMAN CANCER CENTER** Pittsburgh, PA, USA
Predocctoral Scholar on Translational Research Training in Cancer Etiology and Prevention, 2T32CA186873-01
- Perform analyses of cohort and nested case control study data from the Shanghai Cohort Study and Singapore Chinese Health Study (www.schs.pitt.edu)
 - Examine the association between cigarette exposure biomarkers and lung cancer among current smoking men in the Shanghai Cohort Study
 - Analyze genetic polymorphisms association with multiple cancers in the Singapore Chinese Health Study
 - Provide general assistance with Sulforaphane clinical trial and generate reports: Clinical Trial of Lung Cancer Chemoprevention With Sulforaphane in Former Smokers (clinicaltrials.gov identifier: NCT03232138)
- May 2016-
July 2018 **BOSTON UNIVERSITY ALZHEIMER'S DISEASE AND CTE CENTER** Boston, MA, USA
Clinical Trial Research Assistant, Psychometrist/Rater
- Assist in managing and coordinating multiple clinical trials sponsored by pharmaceutical companies and NIH.
 - Screen study participants and conduct diagnostic interviews, administer cognitive testing for 5 clinical trials (primary rater), schedule and coordinate study visits with study participants, enter data into EDC.
 - Interact with participants and make them comfortable during study visits and cognitive testing
 - Back-up rater (neuropsychological testing) for DIAGNOSE CTE Research Project
 - Work with QuintilesIMS CRAs (study monitors) to ensure end-point reliability of study data
 - Train colleagues in Adas-Cog, MMSE, and RBANs cognitive tests for clinical trials: oversee training and certification of employees.
 - Coordinate and schedule visits with multiple Boston Medical Center departments to ensure study participants receive visits and scans (PET, MRI) on time per protocol timelines: BMC Radiology, Ophthalmology, Dermatology.
 - Assist in editing consents of clinical trials to submit to the BU Institutional Review Board.
 - Attend Investigator Meetings for new clinical trials across the US to learn about the trial, our site's participation, procedures, protocol, and logistics.
- January 2016-
May 2016 **MASSACHUSETTS GENERAL HOSPITAL: MASS GENERAL PHYSICIANS ORGANIZATION (MGPO)** Boston, MA, USA
Research Assistant
- Assist with organization and data entry for quality incentive programs for MGH physicians: Quality Incentives, Meaningful Use
 - Use excel to organize and update physician incentive programs data
 - Coordinate with colleagues and outside organizations to plan MGPO Physicians Dinner and Brian McGovern Awards

- Assist with initiatives and organization of MGPO CEO's communications to physicians

January 2016- **DANA-FARBER CANCER INSTITUTE: DEVELOPMENT & THE** Boston, MA, USA
May 2016 **JIMMY FUND**

Development Intern

- Utilize database for tracking donors and trustees of DCFI
- Assist Executive Assistant (EA) with the facilitation of signatures for all written correspondence from Senior Vice President and Development related written correspondence from the President
- Assist EA liaison responsibilities and with organizing special events and functions for SVP and President, preparing meeting agendas, and special events materials
- Assist EA with content review for the monthly electronic newsletter for trustees of DFCI, track and prepare regular reports on trustee volunteer involvement and giving, and assist EA in planning trustee-only events

July-December 2015 **SLONE EPIDEMIOLOGY CENTER at BOSTON UNIVERSITY** Boston, MA, USA
Research Assistant

- Research Assistant for the Pregnancy Health Interview Study (Birth Defects Study), a case control study examining risk factors such as medications and environmental exposures that may be associated with negative outcomes such as birth defects and pregnancy complications
- Contact doctor's offices, hospitals, and employee health centers to confirm the immunization records of patients with release forms in our study. If a patient does not provide us with a release, contact offices about generic vaccine information: brand, lot #, and manufacturer for flu and tdap vaccines
- Organize filing systems for participant records and provide general administrative support for the study

ADDITIONAL WORK EXPERIENCE

- September 2018-March 2021, **Front of House Customer Service/Tour Guide, Bartender at Wigle Whiskey Distillery** (Pittsburgh, PA). Manage the tasting room and engage with customers about Wigle whiskey, gin, rum, liquors, and other products and provide additional information about the distillery that uses all organic local grains and was the first distillery to open in Pittsburgh since prohibition in 2011.
- February-August 2015, **Office Assistant at Boston University Office of Housing** (Boston, MA). Provide general housing information and manage office foot-traffic and phones regarding inquiries about student housing. Able to adjust tone and language and remain calm when interacting with emotional or concerned parents or students along with other housing situations.
- October-December 2014: **Advocacy Intern** at the **Irish Heart Foundation** (Dublin, Ireland). Research regional stroke rehabilitation data from the IHF report, "Towards Earlier Discharge, Better Outcomes, Lower Cost: Stroke Rehabilitation in Ireland" to advocate for better stroke services from regional politicians. Calculate incidence rates by Health Service Executive regions to compare incidence of stroke across geographic location in Ireland. Manage stoke.ie social media and assist organizing events.

VOLUNTEER AND INTERESTS

- **Research Interests:** Chronic disease clinical research, specifically genetic and molecular risk factors for cancer epidemiology.
- Mentor for MPH student through Boston University SPH Alumni Mentorship Program, 2019-2020
- Sigma Delta Tau: Alpha Xi Chapter
- Symphonic Chorus at Boston University (2012-2016)