

Yung-Han (Tina) Chang

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 [Yung-Han \(Tina\) Chang](#) |  [yhc0211](#)

Education

The University of Texas MD Anderson Cancer Center	Houston, TX
Ph.D., Quantitative Science	05/2029(Expected)
· Concentrated in statistical genetics	
University of California, Los Angeles	Los Angeles, CA
M.S., Biostatistics	06/2024
· Selected Courses: Survival Analysis, Mathematical Statistics, Statistical Inference	
National Taiwan University	Taipei, Taiwan
B.S., Biostatistics & Bioinformatics	06/2020
· Vice President in Student Association	

Research Experience

Department of Epidemiology, MD Anderson	Houston, TX
<i>Graduate Student Researcher, Advisor: Prof.Arjun Bhattacharya</i>	06/2024 - Present
· Utilized isoform-level transcriptome-wide association studies (isoTWAS) to uncover genetics risk mechanisms for six cancers that undetected at the gene-level.	
Department of Computational Medicine, UCLA	Los Angeles, CA
<i>Research Assistant, Advisor: Prof.Bogdan Pasaniuc & Prof.Arjun Bhattacharya</i>	09/2022 - 06/2024
· Examining potential factors that drive the lack of portability of gene expression imputation in transcriptome-wide association studies across ancestry.	
· Leading an analysis of 19 (sub)types of cancer and transcript-isoform level expression in 48 types of tissue from the GTEx Project through an isoform-level TWAS approach.	
National Taiwan University Hospital	Taipei, Taiwan
<i>Data Scientist, Advisor: MD, ScD Chien-Chang Lee</i>	11/2021 - 09/2022
· Evaluated the performance of a polygenic risk score (PGS) in predicting COVID-19 severity compared to using a clinical risk equation based on data collected from UK Biobank.	
· Conducted a large-scale GWAS of individuals suffering from headaches in the Taiwan Biobank.	
· Conducted a competitive analysis of cloud computing applications in medicine between Azure and AWS and presented a speech to the CTO of Microsoft Taiwan.	
National Taiwan University	Taipei, Taiwan
<i>Student Researcher, Advisor: Prof. Chen-Tuo Liao</i>	10/2019 - 06/2020
· Predicted pumpkin hybrid performance through genomic selection model to accelerate breeding procedure.	
· Collaborated with the Council of Agriculture to predict tea trees' dry weight and wet weight through climate and environmental factors.	
IQVIA Holdings, Inc.	Taipei, Taiwan
<i>Data Specialist Intern</i>	10/2017 - 08/2018
· Quality control assessments for the marketing data of international pharmaceutical companies in Asia.	

- Aligned efforts with analysts to conduct data visualizations and prepared marketing reports for clients.
- Transferred qualitative survey results into quantitative information for further quantitative analysis.

Publications & Presentations

- **Yung-Han Chang**, S. Taylor Head, Tabitha Harrison, Yao Yu, Chad D. Huff, Bogdan Pasaniuc, Sara Lindström, Arjun Bhattacharya. [“Isoform-level analyses of 6 cancers uncover extensive genetic risk mechanisms undetected at the gene-level”](#). *Poster Presentation at American Society for Human Genetics Annual Meeting 2024 & Preprint on medRxiv*
- Meng-Han Tsai, Sung-Chu Ko, Amy Huaishuan Huang, Lorenzo Porta, Cecilia Ferretti, Clarissa Longhi, Wan-Ting Hsu, **Yung-Han Chang**, Jo-Ching Hsiung, Chin-Hua Su, Filippo Galbiati, Chien-Chang Lee. [“Predicting mortality in hospitalized influenza patients: integration of deep learning-based chest X-ray severity score \(FluDeep-XR\) and clinical variables”](#). *Accepted by Journal of the American Medical Informatics Association*.
- Arjun Bhattacharya, **Yung-Han Chang**, Bogdan Pasaniuc, Sara Lindstroem. [“Isoform-level transcriptome-wide analyses identify extensive genetic mechanisms for breast cancer risk undetectable on the gene-level”](#). *Poster Presentation at the American Association for Cancer Research Annual Meeting 2024*
- **Yung-Han Chang**, Yi Ding, Arjun Bhattacharya, Bogdan Pasaniuc. [“Factors Influencing the Portability of Gene Expression Imputation in Transcriptome-Wide Association Studies across Ancestry”](#). *Poster Presentation at American Society for Human Genetics Annual Meeting 2023 & International Genetic Epidemiology Society Annual Meeting 2023*
- Jasmine Tan, **Yung-Han Chang**, Frank Qian, Wan-Ting Hsu, Chi-Heng Kuo, Silvia Diz-de Almeida, Raquel Cruz, Jose A. Riancho, Augusto Rojas-Martinez, Pablo Lapunzina, Carlos Flores, Angel Carracedo, Chien-Chang Lee. [“A polygenic risk score to predict severe COVID-19 in two prospective biobanks of European ancestry”](#). *Submitted to eClinicalMedicine*
- Ye Liu, Chia-Hung Yo, Jiun-Ruey Hu, Wan-Ting Hsu, Jo-Ching Hsiung, **Yung-Han Chang**, Shyr-Chyr Chen, Chien-Chang Lee. [“Sepsis increases the risk of in-hospital cardiac arrest: a population-based analysis”](#). *published by Internal and Emergency Medicine*
- Wan-Ting Hsu, Yu-Ting Lee, Jasmine Tan, **Yung-Han Chang**, Frank Qian, Kuei-Yu Liu, Jo-Ching Hsiung, Chia-Hung Yo, Sung-Chun Tang, Xia Jiang, Chien-Chang Lee. [“Genome–phenome wide association study of broadly defined headache”](#). *Brain Communications, Volume 5, Issue 3, 2023*
- Lee CC, Lee MG, Huang IH, Tan J, McCaw ZR, Su KY, Hsu TC, Huang RYJ, Kuo PH, Chen SC, **National Taiwan University Hospital, Health Data Science Research Group**. [“Genome-wide association study of primary dysmenorrhea in the Taiwan Biobank validates associations near the NGF and IL1 gene loci”](#). *J Hum Genet. 2022 Aug;67(8):449-458*

Skills

Programming Language: R, Python, SAS, SQL, Linux, Git/GitHub, Bash

Honors & Awards

- Co-reviewer, Nature Communications (2024)
- Co-reviewer, Biometrics (2023)
- Dr. Kuang-Dong Wu Scholarship (USD 1,500)