Stanford



Cheng-Yu Olivia Tsai

Sr. Research Scientist, Pediatrics - Gastroenterology

Bio

ACADEMIC APPOINTMENTS

- Sr. Research Scientist, Pediatrics - Gastroenterology

HONORS AND AWARDS

- Amin Tjota Award for Excellence in Pancreatic Research Prize, NASPGHAN (2024)
- Best Paper Awards for the Best Abstracts in Early Detection in Pancreatic Cancer, American Pancreatic Association the Kenner Family Research Fund (2024)
- Amin Tjota Award for Excellence in Pancreatic Research Prize, NASPGHAN (2022)
- National Pancreas Foundation Award for the Best Paper in Pancreatitis, American Pancreatic Association (2021)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, American Gastroenterological Association (AGA) (2019 - present)
- Member, American Pancreatic Association (APA) (2019 - present)
- Member, American Association for Cancer Research (AACR) (2004 - 2019)

PROFESSIONAL EDUCATION

- PhD, University of Texas MD Anderson Cancer Center

PATENTS

- Rice WG, Howell SB, Tsai C-Y. "United States Patent WO/2019/089511 Aryl Imidazoles for the treatment of cancer."

Publications

PUBLICATIONS

- **Induction of acute pancreatitis in adult zebrafish: A reproducible and quantifiable experimental model.** *Pancreatology : official journal of the International Association of Pancreatology (IAP) ... [et al.]*
  Allawadhi, P., Tsai, C. Y., Hu, W., Banerjee, S., Akshintala, V. S., Lee, B., Nunez, L. H., Husain, S. Z.
  2026
- **A lipid-immune network signature defines susceptibility to asparaginase-associated pancreatitis.** *JCI insight*
  Tsai, C. Y., Bo, N., Tran, T. H., Abu-El-Haija, M., Swaminathan, G., Lee, B., Ghandikota, S., Wen, L., Théorêt, Y., Mittelman, S. D., Ladas, E. J., Jegga, A. G., Silverman, et al
  2026
- **Deep characterization of the vitamin A apparatus in healthy pancreas and during pancreatitis using open-source transcriptomics data**
  Swaminathan, G., Allawadhi, P., Surucu, I., Tsai, C., Lee, B., Nair, R., Husain., S.

LIPPINCOTT WILLIAMS & WILKINS.2025

- **Why is the rectal route for NSAIDS favorable for preventing post-ERCP pancreatitis?** *Pancreatology : official journal of the International Association of Pancreatology (IAP) ... [et al.]*
  Swaminathan, G., Lin, Y. C., Ni, J., Khalid, A., Tsai, C. Y., Ding, Y., Bo, N., Murayi, J. A., Jayaraman, T., Poropatich, R., Bottino, R., Papachristou, G. I., Sheth, et al
  2025

- **Rectal administration of tacrolimus protects against post-ERCP pancreatitis in mice.** *Pancreatology : official journal of the International Association of Pancreatology (IAP) ... [et al.]*
  Lin, Y. C., Ni, J., Swaminathan, G., Khalid, A., Barakat, M. T., Frymoyer, A. R., Tsai, C. Y., Ding, Y., Murayi, J. A., Jayaraman, T., Poropatich, R., Bottino, R., Wen, et al
  2023

- **Preclinical safety evaluation of calcineurin inhibitors delivered through an intraductal route to prevent post-ERCP pancreatitis demonstrates endocrine and systemic safety.** *Pancreatology : official journal of the International Association of Pancreatology (IAP) ... [et al.]*
  Ni, J., Khalid, A., Lin, Y. C., Barakat, M. T., Wang, J., Tsai, C. Y., Azar, P. R., Ding, Y., Murayi, J. A., Jayaraman, T., Poropatich, R., Bottino, R., Wen, et al
  2023

- **A systems approach points to a therapeutic role for retinoids in asparaginase-associated pancreatitis.** *Science translational medicine*
  Tsai, C. Y., Saito, T., Sarangdhar, M., Abu-El-Haija, M., Wen, L., Lee, B., Yu, M., Lipata, D. A., Manohar, M., Barakat, M. T., Contrepois, K., Tran, T. H., Theoret, et al
  2023; 15 (687): eabn2110

- **Single-cell characterization of step-wise acquisition of carboplatin resistance in ovarian cancer.** *NPJ systems biology and applications*
  Wenzel, A. T., Champa, D., Venkatesh, H., Sun, S., Tsai, C., Mesirov, J. P., Bui, J. D., Howell, S. B., Harismendy, O.
  2022; 8 (1): 20

- **Vitamin A and association with asparaginase-associated pancreatitis in children with acute lymphocytic leukemia.**
  Tsai, C., Saito, T., Sarangdhar, M., Abu-El-Haija, M., Wen, L., Lee, B., Manohar, M., Barakat, M. T., Contrepois, K., Bo, N., Ding, Y., Stevenson, K. E., Ladas, et al
  LIPPINCOTT WILLIAMS & WILKINS.2022

- **Impact of acute lymphoblastic leukemia induction therapy: findings from metabolomics on non-fasted plasma samples from a biorepository.** *Metabolomics : Official journal of the Metabolomic Society*
  Saito, T., Wei, Y., Wen, L., Srinivasan, C., Wolthers, B. O., Tsai, C., Harris, M. H., Stevenson, K., Byersdorfer, C., Oparaji, J., Fernandez, C., Mukherjee, A., Abu-El-Haija, et al
  2021; 17 (7): 64

- **The role of asparagine synthetase on nutrient metabolism in pancreatic disease.** *Pancreatology : official journal of the International Association of Pancreatology (IAP) ... [et al.]*
  Tsai, C. Y., Kilberg, M. S., Husain, S. Z.
  2020

- **Synthetic Lethal Interaction between Apto-253 and IDH1/2 Mutations**
  Tsai, C., Zhang, H., Rice, W. G., Howell, S. B.
  ELSEVIER.2019

- **Resistance to APTO-253 caused by internal deletion and alternate promoter usage of the MYC gene in malignant B cells**
  Local, A., Tsai, C., Zhang, H., Sheng, S., Benbatoul, K., Howell, S. B., Rice, W. G.
  AMER ASSOC CANCER RESEARCH.2019

- **Evolution and characterization of carboplatin resistance at single-cell resolution**
  Champa, D., Sun, S., Tsai, C., Howell, S., Harismendy, O.
  AMER ASSOC CANCER RESEARCH.2018

- **CG'806, a first-in-class pan-FLT3/pan-BTK inhibitor, targets multiple pathways to kill diverse subtypes of acute myeloid leukemia and B-cell malignancy in vitro**
  Zhang, H., Local, A., Benbatoul, K., Folger, P., Sheng, S., Tsai, C., Howell, S. B., Rice, W. G.
  AMER ASSOC CANCER RESEARCH.2018

- **APTO-253 is a new addition to the repertoire of drugs that can exploit DNA BRCA1/2 deficiency**
  Tsai, C., Sun, S., Zhang, H., Local, A., Rice, W., Howell, S. B.
  AMER ASSOC CANCER RESEARCH.2018

- **APTO-253 Stabilizes G-quadruplex DNA, Inhibits MYC Expression, and Induces DNA Damage in Acute Myeloid Leukemia Cells** *MOLECULAR CANCER THERAPEUTICS*
  Local, A., Zhang, H., Benbatoul, K. D., Folger, P., Sheng, X., Tsai, C., Howell, S. B., Rice, W. G.
  2018; 17 (6): 1177–86

- **APTO-253 Is a New Addition to the Repertoire of Drugs that Can Exploit DNA BRCA1/2 Deficiency** *MOLECULAR CANCER THERAPEUTICS*
  Tsai, C., Sun, S., Zhang, H., Local, A., Su, Y., Gross, L. A., Rice, W. G., Howell, S. B.
  2018; 17 (6): 1167–76

- **Copper transporters and chaperones CTR1, CTR2, ATOX1, and CCS as determinants of cisplatin sensitivity** *METALLOMICS*
  Bompiani, K. M., Tsai, C., Achatz, F. P., Liebig, J. K., Howell, S. B.
  2016; 8 (9): 951–62

- **The copper transporter 1 (CTR1) is required to maintain the stability of copper transporter 2 (CTR2)** *METALLOMICS*
  Tsai, C., Liebig, J. K., Tsigelny, I. F., Howell, S. B.
  2015; 7 (11): 1477–87

- **Molecular modulation of the copper and cisplatin transport function of CTR1 and its interaction with IRS-4** *BIOCHEMICAL PHARMACOLOGY*
  Tsai, C., Larson, C. A., Safaei, R., Howell, S. B.
  2014; 90 (4): 379–87

- **Characterization of a monoclonal antibody capable of reliably quantifying expression of Human Copper Transporter 1 (hCTR1)** *JOURNAL OF TRACE ELEMENTS IN MEDICINE AND BIOLOGY*
  Quail, J. F., Tsai, C., Howell, S. B.
  2014; 28 (2): 151–59

- **Copper influx transporter 1 is required for FGF, PDGF and EGF-induced MAPK signaling** *BIOCHEMICAL PHARMACOLOGY*
  Tsai, C., Finley, J., Ali, S. S., Patel, H. H., Howell, S. B.
  2012; 84 (8): 1007–13

- **TRIM24 links a non-canonical histone signature to breast cancer** *NATURE*
  Tsai, W., Wang, Z., Yiu, T. T., Akdemir, K. C., Xia, W., Winter, S., Tsai, C., Shi, X., Schwarzer, D., Plunkett, W., Aronow, B., Gozani, O., Fischle, et al
  2010; 468 (7326): 927-U320

- **Targeting DNA Repair in Chronic Lymphocytic Leukemia Cells with a Novel Acyclic Nucleotide Analogue, GS-9219** *CLINICAL CANCER RESEARCH*
  Tsai, C., Ray, A. S., Tumas, D. B., Keating, M. J., Reiser, H., Plunkett, W.
  2009; 15 (11): 3760–69