Stanford

Christina (Christy) Tise, MD, PhD

Assistant Professor of Pediatrics (Genetics)

Pediatrics - Medical Genetics

CLINICAL OFFICE (PRIMARY)

- **Center for Academic Medicine- Genetics**

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Bio

BIO

Dr. Christina (Christy) Tise is a physician scientist and Assistant Professor in the Division of Medical Genetics at Stanford with subspecialty training in Clinical Biochemical Genetics. Dr. Tise has developed multiple research projects focused on the clinical impact of biochemical genetic conditions in pregnancy and newborn health, including a project focused on unforeseen diagnoses in individuals initially identified through state newborn screening which has resulted in a number of publications.

Dr. Tise also researches the genetic etiologies of recurrent pregnancy loss and the impact of inherited metabolic conditions on human reproduction. She is involved in several research initiatives including contributing to the development of TRIOS, a multi-site, NIH-funded research study to evaluate the genetic causes of recurrent pregnancy loss. In serving as the primary research mentor for a recent Masters of Genetic Counseling graduate, Dr. Tise's research on carrier and newborn screening has highlighted areas of ancestry-related healthcare inequities specific to the field of Medical Genetics.

Dr. Tise's primary academic and advocacy interests are embodied in this work, specifically the overlap between biochemical and molecular analysis, and the clinical utility of innovative technologies for diagnosis and treatment of genetic disease. This is an unbelievably thrilling time for the field of Medical Genetics, as it promises immense progress and opportunity for all fields of medicine, and Dr. Tise is determined, honored, and incredibly excited to be a part of it!

Research interests: newborn screening, carrier screening, prenatal screening, genetics of recurrent pregnancy loss, biochemical genetics, novel gene discovery, variant interpretation, founder populations, diagnostic genetic testing, bioethics, GWAS/ExWAS

CLINICAL FOCUS

- Biochemical Genetics
- Newborn Screening
- Reproductive Genetics
- Perinatal Genetics

- Clinical Genetics and Genomics

ACADEMIC APPOINTMENTS

- Assistant Professor - University Medical Line, Pediatrics - Medical Genetics
- Member, Maternal & Child Health Research Institute (MCHRI)

HONORS AND AWARDS

- Golden Helix Faculty Teaching Award, Medical Genetics Residency Program (2023)
- Pfizer/ACMGF Next Generation Clinical Laboratory Biochemical Genetics Fellowship Award, American College of Medical Genetics (2021)
- Henry Christian Award, American Federation for Medical Research (AFMR) (2020)
- Outstanding Recent Biochemistry Undergraduate Alumni Award, Virginia Tech (2018)
- J. Edmund and Kathryn S. Bradley Award for Excellence in Pediatrics, University of Maryland School of Medicine (2018)
- Commencement Speaker for Epidemiology and Human Genetics Graduate Program, University of Maryland School of Medicine (2016)
- 2016 PhD Thesis of the Year Award, Graduate Program in Life Sciences, University of Maryland School of Medicine (2016)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, American College of Medical Genetics Membership Committee (2021 - 2025)
- Member, Stanford MCHRI Education Committee (2022 - present)

PROFESSIONAL EDUCATION

- Medical Education: University of Maryland School of Medicine (2018) MD
- Board Certification: Clinical Genetics and Genomics, American Board of Medical Genetics and Genomics (2021)
- Board Certification: Clinical Biochemical Genetics, American Board of Medical Genetics and Genomics (2023)
- MD, University of Maryland School of Medicine , Medicine (2018)
- PhD, University of Maryland School of Medicine , Human Genetics and Genomic Medicine (2016)
- Fellowship: Stanford University Clinical Biochemical Genetics Fellowship (2022) CA
- Residency: Stanford University Division of Medical Genetics (2021) CA
- Internship: Stanford University Pediatric Residency at Lucile Packard Children's Hospital (2019) CA
- BS, Virginia Tech , Biochemistry (2009)

Research & Scholarship

CLINICAL TRIALS

- Pregnancy and Developmental Outcomes After Transfer of Reportedly Aneuploid or Mosaic Embryos, Recruiting

Teaching

COURSES

2024-25

- Introduction to Medical Genetics: GENE 272 (Aut)

2023-24

- Introduction to Medical Genetics: GENE 272 (Aut)

2022-23

- Introduction to Medical Genetics: GENE 272 (Aut)

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Human Genetics and Genetic Counseling (Masters Program)
- Medical Biochemical Genetics (Fellowship Program)
- Medical Genetics (Fellowship Program)
- Reproductive Endocrinology and Infertility (Fellowship Program)

Publications

PUBLICATIONS

- **BiallelicSLC13A1loss-of-function variants result in impaired sulfate transport and skeletal phenotypes, including short stature, scoliosis, and skeletal dysplasia.** *Genetics in medicine open*
  Tise, C. G., Ashton, K., de Hayr, L., Lee, K., Patkar, O. L., Krzesinski, E., Bassetti, J. A., Carter, E. M., Raggio, C., Zankl, A., Khanshour, A. M., Atala, K. N., Rios, et al
  2025; 3: 101958

- **GENETIC TESTING OF MISCARRIAGES: THE HISPANIC EXPERIENCE FROM THE HARNESS MULTIPLE OPPORTUNITIES FOR PREGNANCY LOSS EXPLORATION (HOPE) NATIONAL REGISTRY**
  Rivera-Cruz, G., Kruger, S. L., Tise, C. G., Bianco, K., Lathi, R. B.
  ELSEVIER SCIENCE INC.2024: E410

- **STRUCTURALVARIANTS INGENOMESOF PATIENTS WITH RECURRENT PREGNANCY LOSS (RPL): THE UTILITY OF OPTICAL GENOME MAPPING (OGM).**
  Handelsman, R. G., Verma, K., Rodriguez-Escriba, M., Tise, C. G., Cakmak, H., Rajkovic, A., Lathi, R. B., Yatsenko, S.
  ELSEVIER SCIENCE INC.2024: E183-E184

- **Molecular Testing in Newborn Screening: VUS Burden Among True Positives and Secondary Reproductive Limitations via Expanded Carrier Screening Panels.** *Genetics in medicine : official journal of the American College of Medical Genetics*
  Cook, S., Dunn, E., Kornish, J., Calderwood, L., Campion, M., Cusmano-Ozog, K. P., Tise, C. G.
  2023: 101055

- **MT-ATP6 mitochondrial disease identified by newborn screening reveals a distinct biochemical phenotype.** *American journal of medical genetics. Part A*
  Tise, C. G., Verscaj, C. P., Mendelsohn, B. A., Woods, J., Lee, C. U., Enns, G. M., Stander, Z., Hall, P. L., Cowan, T. M., Cusmano-Ozog, K. P.
  2023

- **Neonatal lupus is a novel cause of positive newborn screening for X-linked adrenoleukodystrophy.** *American journal of medical genetics. Part A*
  Niehaus, A. D., Mendelsohn, B. A., Zimmerman, B., Lee, C. U., Manning, M. A., Cusmano-Ozog, K. P., Tise, C. G.
  2023

- **Medical genetics training in the COVID-19 era: A resident's perspective.** *American journal of medical genetics. Part A*
  Tise, C. G.
  2021

- **Unexpected diagnoses in patients with abnormal newborn screening**
  Tise, C., Velez-Bartolomei, F., Morales, J., Lee, C., Bernstein, J., Enns, G.
  ACADEMIC PRESS INC ELSEVIER SCIENCE.2021: S354

- **Genetics of recurrent pregnancy loss: a review.** *Current opinion in obstetrics & gynecology*
  Tise, C. G., Byers, H. M.
  2021

- **Aicardi-Goutières syndrome may present with positive newborn screen for X-linked adrenoleukodystrophy.** *American journal of medical genetics. Part A*
  Tise, C. G., Morales, J. A., Lee, A. S., Velez-Bartolomei, F. n., Floyd, B. J., Levy, R. J., Cusmano-Ozog, K. P., Feigenbaum, A. S., Ruzhnikov, M. R., Lee, C. U., Enns, G. M.
  2021

- **From Genotype to Phenotype: Nonsense Variants in SLC13A1 Are Associated with Decreased Serum Sulfate and Increased Serum Aminotransferases** *G3-GENES GENOMES GENETICS*
  Tise, C. G., Perry, J. A., Anforth, L. E., Pavlovich, M. A., Backman, J. D., Ryan, K. A., Lewis, J. P., O'Connell, J. R., Yerges-Armstrong, L. M., Shuldiner, A. R.
  2016; 6 (9): 2909-2918
- **Fetal phenotype and diagnosis of autosomal dominant Robinow syndrome due to novel DVL1 variant.** *Prenatal diagnosis*
  Smith, C. M., Guinon, K., Bachir, S., Tise, C. G.
  2024
- **Newborn Screening for X-Linked Adrenoleukodystrophy (X-ALD): Biochemical, Molecular, and Clinical Characteristics of Other Genetic Conditions.** *Genes*
  Mares Beltran, C. F., Tise, C. G., Barrick, R., Niehaus, A. D., Sponberg, R., Chang, R., Enns, G. M., Abdenur, J. E.
  2024; 15 (7)
- **Decoding the Mystery of Recurrent Pregnancy Loss: Revelations from Genome Sequencing.**
  Aminbeidokhti, M., Nagasuri, A., Cakmak, H., Jaswa, E., Baldwin, M., Edelman, A., Pollard, E., Snyder, M., Sirota, M., Tise, C., Bernstein, J., Stephenson, M., Lathi, et al
  SPRINGER HEIDELBERG.2024: 76A
- **Monozygotic twins discordant for a congenital cranial dysinnervation disorder with features of Moebius syndrome.** *American journal of medical genetics. Part A*
  Gates, R. W., Webb, B. D., Stevenson, D. A., Jabs, E. W., DeFilippo, C., Ruzhnikov, M. R., Tise, C. G.
  2023
- **A homozygous Gly470Ala variant in PEX6 causes severe Zellweger spectrum disorder.** *American journal of medical genetics. Part A*
  Galarreta, C. I., Wong, K., Carmichael, J., Woods, J., Tise, C. G., Niehaus, A. D., Schildt, A. J., Verscaj, C. P., Cusmano-Ozog, K. P.
  2023
- **BIOCHEMICAL, MOLECULAR, AND CLINICAL CHARACTERISTICS OF PEROXISOMAL DISORDERS DETECTED BY CALIFORNIA NEWBORN SCREENING (NBS) PROGRAM**
  Beltran, C., Abdenur, J., Chang, R., Barrick, R., Spongberg, R., Tise, C. G., Niehaus, A. D., Enns, G.
  ACADEMIC PRESS INC ELSEVIER SCIENCE.2023: 72
- **Creatine Transporter Deficiency Presenting as Failure to Thrive: A Case Report of a Novel SLC6A8 Variant Causing a Treatable but Likely Underdiagnosed Genetic Disorder.** *Journal of investigative medicine high impact case reports*
  Tise, C. G., Palma, M. J., Cusmano-Ozog, K. P., Matalon, D. R.
  2023; 11: 23247096231154438
- **Recent tPA administration can cause pseudo-hyperargininemia and may mimic arginase deficiency or arginine supplementation.** *JIMD reports*
  Cusmano-Ozog, K. P., Renck, A. K., Tise, C. G.
  2022; 63 (6): 563-567
- **Short Bones, Renal Stones, and Diagnostic Moans: Hypercalcemia in a Girl Found to Have Coffin-Lowry Syndrome.** *Journal of investigative medicine high impact case reports*
  Tise, C. G., Matalon, D. R., Manning, M. A., Byers, H. M., Grover, M.
  2022; 10: 23247096221101844
- **MITOCHONDRIAL-ATP6-ASSOCIATED DISEASE PRESENTS WITH DISTINCT PATTERN ON NEWBORN SCREENING: SHOULD IT BE INCLUDED AS A SECONDARY CONDITION?**
  Tise, C., Mendelsohn, B., Lee, C., Woods, J., Hall, P., Tang, H., Rinaldo, P., Cowan, T., Cusmano-Ozog, K.
  ACADEMIC PRESS INC ELSEVIER SCIENCE.2022: 247-248
- **SUCCESSFUL CARDIAC TRANSPLANTATION AND LONG-TERM FOLLOW-UP IN DNAJC19-ASSOCIATED DILATED CARDIOMYOPATHY WITH ATAXIA**
  Tahata, S., Tise, C., Floyd, B., Cusmano-Ozog, K., Ruzhnikov, M., Enns, G.
  ACADEMIC PRESS INC ELSEVIER SCIENCE.2022: 302
- **Biochem for the Win! The added value of biochemical genetic testing for diagnosis and variant interpretation in the genomic era**
  Tise, C., Grand, K., Corado, J., Gates, R., Graham, J., Enns, G., Gomez-Ospina, N., Mak, J., Cowan, T., Cusmano-Ozog, K.

ELSEVIER SCIENCE INC.2022: S24

- **Clinical characterization of a new individual with mild SC4MOL deficiency: diagnostic and therapeutic implications** *JOURNAL OF TRANSLATIONAL GENETICS AND GENOMICS*
  Morales, J., Curry, C. J., Tise, C. G., Kratz, L., Enns, G. M.
  2022; 6 (2): 257-265
- **Profound neonatal lactic acidosis and renal tubulopathy in a patient with glycogen storage disease type IXα2 secondary to a de novo pathogenic variant in PHKA2.** *Molecular genetics and metabolism reports*
  Morales, J. A., Tise, C. G., Narang, A., Grimm, P. C., Enns, G. M., Lee, C. U.
  2021; 27: 100765
- **Case 1: Rapidly Rising Bilirubin Level in a 3-day-old Term Infant.** *NeoReviews*
  Tise, C. G., Joshi, N. S., Erice-Taganas, A. D., Blecharczyk, E. M.
  2020; 21 (10): e687–e690
- **nonsense variants on DHEA homeostasis.** *Molecular genetics and metabolism reports*
  Tise, C. G., Anforth, L. E., Zhou, A. E., Perry, J. A., McArdle, P. F., Streeten, E. A., Shuldiner, A. R., Yerges-Armstrong, L. M.
  2017; 10: 84-91
- **Are Patients with Psychogenic Movement Disorders More Likely to be Healthcare Workers?** *MOVEMENT DISORDERS CLINICAL PRACTICE*
  Perry, C. G., Holmes, K. G., Gruber-Baldini, A. L., Anderson, K. E., Shulman, L. M., Weiner, W. J., Reich, S. G.
  2017; 4 (1): 62–67
- **Educational Innovations in Clinical Pharmacogenomics** *CLINICAL PHARMACOLOGY & THERAPEUTICS*
  Perry, C. G., Maloney, K. A., Beitelshees, A. L., Jeng, L. J., Ambulos, N. P., Shuldiner, A. R., Blitzer, M. G.
  2016; 99 (6): 582-584
- **Pharmacometabolomics reveals that serotonin is implicated in aspirin response variability.** *CPT: pharmacometrics & systems pharmacology*
  Ellero-Simatos, S., Lewis, J. P., Georgiades, A., Yerges-Armstrong, L. M., Beitelshees, A. L., Horenstein, R. B., Dane, A., Harms, A. C., Ramaker, R., Vreeken, R. J., Perry, C. G., Zhu, H., Sànchez, et al
  2014; 3
- **Pharmacogenomics of Anti-platelet and Anti-coagulation Therapy** *CURRENT CARDIOLOGY REPORTS*
  Fisch, A. S., Perry, C. G., Stephens, S. H., Horenstein, R. B., Shuldiner, A. R.
  2013; 15 (7)
- **Pharmacogenomics of anti-platelet therapy: how much evidence is enough for clinical implementation?** *JOURNAL OF HUMAN GENETICS*
  Perry, C. G., Shuldiner, A. R.
  2013; 58 (6): 339-345