

Stanford



Tian Yi Zhang, MD, PhD

Assistant Professor of Medicine (Hematology)

Medicine - Hematology

 Curriculum Vitae available Online

CLINICAL OFFICE (PRIMARY)

- **Hematology**

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Bio

BIO

Dr. Zhang is a board-certified hematologist. She is also an assistant professor of hematology at Stanford University School of Medicine. In addition to her medical degree, she holds a PhD in cellular and molecular immunology.

In her clinical practice, she treats patients with all forms of hematological malignancies, offering specialized expertise in acute myeloid leukemia, including therapy-resistant cases. For each patient, she develops a personalized care plan encompassing novel treatment options.

Her research activities include conducting early phase clinical trials, investigator initiated clinical trials (IITs), studying the immune repertoire in patients with myeloid malignancies, and exploring cholesterol metabolic dependencies of acute myeloid leukemia (AML).

She was the recipient of an A.P. Giannini Foundation fellowship award, which supports innovative research. The award helped fund Dr. Zhang's study of how AML cells interact with other cells in bone marrow. A significant finding confirmed that AML cells secrete a protein that suppresses the production of red blood cells, the same protein that causes inflammation in disorders such as rheumatoid arthritis and Crohn's disease.

Her many other honors include the National Cancer Institute Career Development (K08) Award, the American Society of Hematology (ASH) Research Training Award for Fellows, Stanford Cancer Institute - American Cancer Society (SCI-ACS) Pilot Grant and Best ASH Abstract Award two years in a row. She also has earned recognition from the National Institutes of Health and American College of Physicians.

She has published her research findings on topics such as advanced therapy for high-risk myelodysplastic syndromes and reversal of bone marrow failure induced by AML. Her work has appeared in Leukemia & Lymphoma, Science Translational Medicine, Cancer Research, the Journal of Clinical Investigation, Journal of Immunology, and elsewhere.

Dr. Zhang is a member of the American Association of Cancer Research and American Society of Hematology. She advises and mentors Stanford medical students, residents and fellows. She delivers invited lectures to faculty and fellows. In addition, she has been an invited speaker on the topic of acute myeloid leukemia at the Association of Northern California Oncologists Update on Hematological Malignancies.

CLINICAL FOCUS

- Hematology

ACADEMIC APPOINTMENTS

- Assistant Professor - University Medical Line, Medicine - Hematology

PROFESSIONAL EDUCATION

- Medical Education: University of Utah School of Medicine (2011) UT
- Board Certification: Hematology, American Board of Internal Medicine (2019)
- Fellowship: Stanford University Hematology and Oncology Fellowship (2018) CA
- Board Certification: Internal Medicine, American Board of Internal Medicine (2014)
- Residency: University of Utah Internal Medicine Residency (2014) UT
- PhD, University of Utah School of Medicine , Cellular and Molecular Immunology (2007)

LINKS

- The Zhang Lab official website: <https://www.thezhanglabstanford.com/>

Research & Scholarship

CLINICAL TRIALS

- Enasidenib in MDS &Non-proliferative Chronic Myelomonocytic Leukemia w/o IDH2 Mutation, Recruiting
- A Study to Assess Safety and Tolerability of CC-486 (ONUREG®, Oral Azacitidine) in Combination Therapy in Participants With Acute Myeloid Leukemia (AML), Not Recruiting

Teaching

STANFORD ADVISEES

Med Scholar Project Advisor

Guan Li, Sanjeeth Rajaram, Emily Yang

Publications

PUBLICATIONS

- **p53 immunohistochemistry as an ancillary tool for rapid assessment of residual disease in TP53-mutated acute myeloid leukemia and myelodysplastic syndromes.** *American journal of clinical pathology*
Brar, N., Lawrence, L., Fung, E., Zehnder, J. L., Greenberg, P. L., Mannis, G. N., Zhang, T. Y., Gratzinger, D., Oak, J., Silva, O., Kurzer, J., Tan, B., Menke, et al 2024
- **Natural history of clonal haematopoiesis seen in real-world haematology settings.** *British journal of haematology*
Patel, S. A., Gerber, W. K., Zheng, R., Khanna, S., Hutchinson, L., Abel, G. A., Cerny, J., DaSilva, B. A., Zhang, T. Y., Ramanathan, M., Khedr, S., Selove, W., Woda, et al 2024
- **Analysis of Treatment Patterns and Outcomes in Patients Ages 60-74 in the PostVenetoclax Era**
St Martin, E. C., Schwede, M., Fakhri, B., Gotlib, J., Liedtke, M., Shomali, W., Zhang, T. Y., Mannis, G.
AMER SOC HEMATOLOGY.2023

- **Acute Myeloid Leukemia with Inv(3) or t(3;3): A Clinical and Cytogenetic Characterization of 40 Patients**
Moscvin, M., Schwede, M., Mannis, G., Zhang, T. Y.
AMER SOC HEMATOLOGY.2023
- **Sole DNMT3A/TET2/ASXL1 Mutations Define a Distinct Clinical Trajectory for Patients with Clonal Hematopoiesis**
Patel, S., Gerber, W. K., Zheng, R., Khanna, S., Hutchinson, L., Cerny, J., Dasilva, B., Zhang, T. Y., Khedr, S., Selove, W., Woda, B., Abel, G. A., Miron, et al
AMER SOC HEMATOLOGY.2023
- **Development of Circulating Tumor DNA (ctDNA) for Molecular Measurable Residual Disease (MRD) in Acute Myeloid Leukemia (AML)**
Gunaratne, R., Zhou, C., Tai, J. W., Schwede, M., Tanaka, K., Alkaitis, M., Yin, R., Sworder, B. J., Mannis, G., Majeti, R., Khodadoust, M. S., Kurtz, D. M., Zhang, et al
AMER SOC HEMATOLOGY.2023
- **Cladribine and Low-Dose Cytarabine-Based Salvage Therapy for Relapsed/Refractory AML in a Predominantly Venetoclax-Exposed Cohort**
Cheung, E., Schumann, C., Zhang, T. Y., Fakhri, B., Gotlib, J., Liedtke, M., Shomali, W., Mannis, G.
AMER SOC HEMATOLOGY.2023
- **Immunosuppression in Isocitrate Dehydrogenase Mutated Acute Myeloid Leukemia**
Tai, J. W., Li, G., Tanaka, K., Gopakumar, J., Zhou, C., Linde, M., Villar-Prados, A., Rangavajhula, A. S., Trotman-Grant, A. C., Landberg, N., Fan, A. C., Mannis, G., Zhang, et al
AMER SOC HEMATOLOGY.2023
- **Phase 1b/2 Trial of Enasidenib in Lower-Risk MDS and Nonproliferative CMML without Isocitrate Dehydrogenase Type 2 Mutations**
Kuo, E., Santiago, V., Tanaka, K., Puram, V., Zhou, C., Tai, J. W., Mannis, G., Majeti, R., Zhang, T. Y.
AMER SOC HEMATOLOGY.2023
- **The Shifting Prognosis of FLT3 Mutations in Acute Myeloid Leukemia in the Era of Targeted Therapy: A Real-World Study Using Large-Scale Electronic Health Record Data**
Schwede, M., Rodriguez, G., Henry, S., Wood, D., Mannis, G., Majeti, R., Chen, J., Bendavid, E., Zhang, T. Y.
AMER SOC HEMATOLOGY.2023
- **Harnessing Artificial Intelligence for Risk Stratification in Acute Myeloid Leukemia (AML): Evaluating the Utility of Longitudinal Electronic Health Record (EHR) Data Via Graph Neural Networks**
Sinha, R., Schwede, M., Ben Viggiano, Kuo, D., Henry, S., Wood, D., Mannis, G., Majeti, R., Chen, J., Zhang, T. Y.
AMER SOC HEMATOLOGY.2023
- **Phase IB OMNIVERSE Trial: Safety and Tolerability of Oral Azacitidine (Oral-AZA) in Combination With Venetoclax (VEN) for Treatment of Acute Myeloid Leukemia (AML)**
Fleming, S., Roboz, G. J., Fathi, A. T., Zhang, T. Y., Wei, A., Carraway, H. E., Holes, L., Petrlik, E., Prebet, T., Menezes, D. L., Bluemmert, I., Sun, H., Ravandi, et al
CIG MEDIA GROUP, LP.2023: S293
- **Phase 1b OMNIVERSE trial: Safety and tolerability of oral azacitidine (Oral-AZA) in combination with venetoclax (VEN) for treatment of acute myeloid leukemia**
Fleming, S., Roboz, G. J., Fathi, A., Zhang, T., Wei, A., Carraway, H. E., Holes, L., Petrlik, E., Prebet, T., De Menezes, D., Bluemmert, I., Sun, H., Ravandi, et al
LIPPINCOTT WILLIAMS & WILKINS.2023
- **Outcomes with molecularly targeted agents as salvage therapy following frontline venetoclax + hypomethylating agent in adults with acute myeloid leukemia: A multicenter retrospective analysis. *Leukemia research***
Khanna, V., Azenkot, T., Liu, S. Q., Gilbert, J., Cheung, E., Lau, K., Polleyea, D. A., Traer, E., Jonas, B. A., Zhang, T. Y., Mannis, G. N.
2023; 131: 107331
- **The Goldilocks Dilemma in AML: Too Young and Fit, but Not Young and Fit Enough. *Clinical lymphoma, myeloma & leukemia***
St Martin, E. C., Zhang, T. Y., Mannis, G. N.
2023
- **Reprogramming Cancer into Antigen Presenting Cells as a Novel Immunotherapy. *Cancer discovery***
Linde, M. H., Fan, A. C., Kohnke, T., Trotman-Grant, A. C., Gurev, S. F., Phan, P., Zhao, F., Haddock, N. L., Nuno, K. A., Gars, E. J., Stafford, M., Marshall, P. L., Dove, et al
2023

- **Disease Characterization and Response Prediction in Myeloma Patients Undergoing Conventional and Cellular Therapies from Circulating Tumor DNA**
Hosoya, H., Carleton, M., Tanaka, K. L., Swarder, B., Hovanky, V., Duran, G. E., Zhang, T. Y., Khodadoust, M. S., Miklos, D. B., Arai, S., Iberri, D., Liedtke, M., Sidana, et al
AMER SOC HEMATOLOGY.2022: 1546-1548
- **Outcomes with Molecularly Targeted Agents As Salvage Therapy Following Frontline HMA/Venetoclax in Adults with Acute Myeloid Leukemia: A Multi-Center Retrospective Analysis**
Khanna, V., Azenkot, T., Liu, S., Gilbert, J., Cheung, E., Lau, K., Polleyea, D. A., Traer, E., Jonas, B. A., Zhang, T. Y., Mannis, G. N.
AMER SOC HEMATOLOGY.2022: 3294-3296
- **Feasibility Study Integrating Electronic Patient-Reported Outcomes (PROs) and Palliative Care for High-Risk Acute Myeloid Leukemia (AML) Patients**
Tan, I., Choi, J., Cunanan, K., Fronk, J., Zhang, T., Mannis, G. N., Ramchandran, K.
CIG MEDIA GROUP, LP.2021: S279-S280
- **Niche-directed therapy in acute myeloid leukemia: optimization of stem cell competition for niche occupancy.** *Leukemia & lymphoma*
Patel, S. A., Dalela, D., Fan, A. C., Lloyd, M. R., Zhang, T. Y.
2021: 1-9
- **Reprogramming cancer into antigen presenting cells as a novel immunotherapy.**
Linde, M. H., Gurev, S. F., Phan, P., Zhao, F., Gars, E. J., Stafford, M., Kohnke, T., Marshall, P. L., Fan, A. C., Dove, C. G., Linde, I. L., Miller, L. P., Majzner, et al
AMER ASSOC CANCER RESEARCH.2021
- **Routine use of gemtuzumab ozogamicin in 7 + 3-based inductions for all 'non-adverse' risk AML.** *Leukemia & lymphoma*
Ladha, A. n., Hui, G. n., Cheung, E. n., Berube, C. n., Coutre, S. E., Gotlib, J. n., Liedtke, M. n., Zhang, T. Y., Muffly, L. n., Mannis, G. N.
2021: 1-6
- **Heterogeneous Definitions of Secondary Acute Myeloid Leukemia (AML) Yield Distinct Outcomes in Response to First-Line Treatment with Hypomethylating Agents (HMA) and Venetoclax (Ven)**
Tan, I., Schwede, M., Phan, P., Yin, R., Zhang, T. Y., Mannis, G. N.
2021
- **Clinico-genomic profiling and clonal dynamic modeling of TP53-aberrant myelodysplastic syndrome and acute myeloid leukemia.** *Leukemia & lymphoma*
Patel, S. A., Lloyd, M. R., Cerny, J., Shi, Q., Simin, K., Ediriwickrema, A., Hutchinson, L., Miron, P. M., Higgins, A. W., Ramanathan, M., Gerber, J. M.
2021: 1-13
- **Epstein-Barr virus-positive lymphoproliferative disorder manifesting as pulmonary disease in a patient with acute myeloid leukemia: a case report.** *Journal of medical case reports*
Dutta, R. n., Miao, S. Y., Phan, P. n., Fernandez-Pol, S. n., Shiraz, P. n., Ho, D. n., Mannis, G. N., Zhang, T. Y.
2021; 15 (1): 170
- **Targeting LSCs: Peeling Back the Curtain on the Metabolic Complexities of AML.** *Cell stem cell*
Zhang, T. Y., Majeti, R.
2020; 27 (5): 693-95
- **Donor-derived acute promyelocytic leukemia presenting as myeloid sarcoma in a transplanted kidney.** *Leukemia*
Wong, R. L., Ketcham, M., Irwin, T., Akilesh, S., Zhang, T. Y., Reyes, J. D., Edlefsen, K., Jalikis, F., Becker, P. S.
2020
- **IL-6 blockade reverses bone marrow failure induced by human acute myeloid leukemia.** *Science translational medicine*
Zhang, T. Y., Dutta, R., Benard, B., Zhao, F., Yin, R., Majeti, R.
2020; 12 (538)
- **Enasidenib drives human erythroid differentiation independently of isocitrate dehydrogenase 2.** *The Journal of clinical investigation*
Dutta, R. n., Zhang, T. Y., Köhnke, T. n., Thomas, D. n., Linde, M. n., Gars, E. n., Stafford, M. n., Kaur, S. n., Nakuchi, Y. n., Yin, R. n., Azizi, A. n., Narla, A. n., Majeti, et al
2020
- **Venetoclax and hypomethylating agent therapy in high risk myelodysplastic syndromes: a retrospective evaluation of a real-world experience.** *Leukemia & lymphoma*

Azizi, A. n., Ediriwickrema, A. n., Dutta, R. n., Patel, S. A., Shomali, W. n., Medeiros, B. n., Iberri, D. n., Gotlib, J. n., Mannis, G. n., Greenberg, P. n., Majeti, R. n., Zhang, T. n.
2020; 1–8

- **Improved Outcomes of Octogenarians and Nonagenarians with Acute Myeloid Leukemia in the Era of Novel Therapies.** *American journal of hematology*
Jeng, M. Y., Dutta, R. n., Tan, I. T., Zhang, T. Y., Mannis, G. N.
2020

- **Enasidenib Drives Maturation of Human Erythroid Precursors Independently of IDH2**
Dutta, R., Zhang, T. Y., Koehnke, T., Thomas, D., Gars, E., Stafford, M., Nakuchi, Y., Kaur, S., Yin, R., Narla, A., Majeti, R.
AMER SOC HEMATOLOGY.2019

- **Human Acute Myeloid Leukemia Inhibits Normal Erythroid Differentiation through the Paracrine Effects of IL-6**
Zhang, T. Y., Dutta, R., Zhao, F., Majeti, R.
AMER SOC HEMATOLOGY.2018

- **beta-Catenin is required for intrinsic but not extrinsic BCR-ABL1 kinase-independent resistance to tyrosine kinase inhibitors in chronic myeloid leukemia LEUKEMIA**
Eiring, A. M., Khorashad, J. S., Anderson, D. J., Yu, F., Redwine, H. M., Mason, C. C., Reynolds, K. R., Clair, P. M., Gantz, K. C., Zhang, T. Y., Pomicter, A. D., Kraft, I. L., Bowler, et al
2015; 29 (12): 2328–37

- **Combined STAT3 and BCR-ABL1 inhibition induces synthetic lethality in therapy-resistant chronic myeloid leukemia LEUKEMIA**
Eiring, A. M., Page, B. G., Kraft, I. L., Mason, C. C., Vellore, N. A., Resetca, D., Zabriskie, M. S., Zhang, T. Y., Khorashad, J. S., Engar, A. J., Reynolds, K. R., Anderson, D. J., Senina, et al
2015; 29 (3): 586–97

- **KIT Signaling Governs Differential Sensitivity of Mature and Primitive CML Progenitors to Tyrosine Kinase Inhibitors CANCER RESEARCH**
Corbin, A. S., O'Hare, T., Gu, Z., Kraft, I. L., Eiring, A. M., Khorashad, J. S., Pomicter, A. D., Zhang, T. Y., Eide, C. A., Manley, P. W., Cortes, J. E., Druker, B. J., Deininger, et al
2013; 73 (18): 5775–86

- **Hepcidin mediates transcriptional changes that modulate acute cytokine-induced inflammatory responses in mice JOURNAL OF CLINICAL INVESTIGATION**
De Domenico, I., Zhang, T. Y., Koening, C. L., Branch, R. W., London, N., Lo, E., Daynes, R. A., Kushner, J. P., Li, D., Ward, D. M., Kaplan, J.
2010; 120 (7): 2395–2405

- **Macrophages from 11 beta-hydroxysteroid dehydrogenase type 1-deficient mice exhibit an increased sensitivity to lipopolysaccharide stimulation due to TGF-beta-Mediated up-regulation of SHIP1 expression JOURNAL OF IMMUNOLOGY**
Zhang, T. Y., Daynes, R. A.
2007; 179 (9): 6325–35

- **Glucocorticoid conditioning of myeloid progenitors enhances TLR4 signaling via negative regulation of the phosphatidylinositol 3-kinase-Akt pathway JOURNAL OF IMMUNOLOGY**
Zhang, T. Y., Daynes, R. A.
2007; 178 (4): 2517–26

- **The expression of 11 beta-hydroxysteroid dehydrogenase type I by lymphocytes provides a novel means for intracrine regulation of glucocorticoid activities JOURNAL OF IMMUNOLOGY**
Zhang, T. Y., Ding, X. H., Daynes, R. A.
2005; 174 (2): 879–89

- **Peroxisome proliferator-activated receptor alpha negatively regulates T-bet transcription through suppression of p38 mitogen-activated protein kinase activation JOURNAL OF IMMUNOLOGY**
Jones, D. C., Ding, X. H., Zhang, T. Y., Daynes, R. A.
2003; 171 (1): 196–203