



Daniel Yuhang Li

Instructor, Medicine - Cardiovascular Medicine

CLINICAL OFFICE (PRIMARY)

- **Medicine**

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Bio

BIO

I am a physician scientist in the Division of Cardiology at Stanford. My clinical interest is at the intersection of inflammation, autoimmunity and cardiovascular disease in a field called 'Cardio-Rheumatology'. Patients with rheumatologic diseases typically have an elevated cardiovascular disease risk profile along with an insidious onset. Moreover, with the ever-expanding biologic drug formulary for patients, it is important for us to characterize the cardiovascular effects of these medications. In my research, I believe that understanding how inflammatory and autoimmune mechanisms modify coronary artery disease can help us develop a novel perspective towards treating atherosclerosis beyond lipid lowering. My research goal is to advance novel therapeutics for atherosclerosis by leveraging my expertise in genetics, computational biology, and experience with diverse model organism perturbation models. My strategy employs a 'systems' approach, starting with human population variations at the genetic level and integrating findings across RNA, protein, and model organism studies. This comprehensive synthesis aims to grasp the overarching biological narrative, thereby facilitating the development of translational therapies that transform concepts from bench to bedside.

CLINICAL FOCUS

- Cardiovascular Disease

ACADEMIC APPOINTMENTS

- Instructor, Medicine - Cardiovascular Medicine

HONORS AND AWARDS

- Elaine W. Raines Early Career Investigator Award Finalist, ATVB, AHA (2025)
- K08 Mentored Clinical Scientist Research Career Development Award, NHLBI, NIH (2025-2030)
- Sarnoff Scholar Career Development Award, Sarnoff Cardiovascular Research Foundation (2024-2026)
- Research on Emerging Areas Critical to Human Health LRP Award, NHLBI, NIH (2024-2026)
- Alan Yeung and Sharon Hunt Outstanding Clinical Fellow Award, Stanford, Division of Cardiovascular Medicine (2022)
- Ruth L. Kirschstein National Research Service Award F32, NHLBI, NIH (2022-2024)
- Stanley J. Sarnoff Cardiovascular Research Fellowship, Sarnoff Cardiovascular Research Foundation (2016)

- National Institutes of Health Intramural Research Training Award, NIAID, NIH (2012)

PROFESSIONAL EDUCATION

- Board Certification, American Board of Internal Medicine , Cardiovascular Disease
- Board Certification, National Board of Echocardiography , Adult Echocardiography
- Board Certification, American Board of Internal Medicine , Internal Medicine
- Fellowship, Stanford University Cardiovascular Medicine Fellowship Program , CA
- Residency, Stanford University Internal Medicine Residency , CA
- Medical Education, Cleveland Clinic Lerner College of Medicine , OH

Teaching

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Cardiovascular Medicine (Fellowship Program)

Publications

PUBLICATIONS

- **Single-cell and spatial transcriptomics identify immune-stromal interactions in cardiac allograft vasculopathy.** *Nature cardiovascular research*
Owen, M. C., Li, D. Y., Shin, H., Gu, W., Parvathaneni, A., Kadyrov, F. F., Wang, X., Sticco-Ivins, M., Bonnici, G., Nelson, S. L., Dun, H., Hyacinth, S., Giangrasso, et al
2026; 5 (5): 439-455
- **Vascular smooth muscle cell state trajectories mediate molecular mechanisms of coronary disease risk.** *Nature communications*
Li, D. Y., Kundu, S., Cheng, P., Gu, W., Worssam, M. D., Jackson, W. R., Zhao, Q., Nguyen, T., Yu, A. M., Monteiro, J. P., Caceres, R. D., Dale, S., Palmisano, et al
2026
- **A cell and transcriptome atlas of human arterial vasculature.** *Cell genomics*
Zhao, Q., Pedroza, A., Sharma, D., Gu, W., Dalal, A., Weldy, C., Jackson, W., Li, D. Y., Ryan, Y., Nguyen, T., Shad, R., Palmisano, B. T., Monteiro, et al
2025: 101034
- **Smooth muscle expression of RNA editing enzyme ADAR1 controls activation of the RNA sensor MDA5 in atherosclerosis.** *Nature cardiovascular research*
Weldy, C. S., Li, Q., Monteiro, J. P., Peters, T. S., Guo, H., Galls, D., Gu, W., Cheng, P. P., Ramste, M., Li, D., Palmisano, B. T., Sharma, D., Worssam, et al
2025
- **Epigenomic landscape of single vascular cells reflects developmental origin and disease risk loci.** *Molecular systems biology*
Weldy, C. S., Kundu, S., Monteiro, J., Gu, W., Pedroza, A. J., Dalal, A. R., Worssam, M. D., Li, D., Palmisano, B., Zhao, Q., Sharma, D., Nguyen, T., Kundu, et al
2025
- **Enhancer-targeting CRISPR screens at coronary artery disease loci suggest shared mechanisms of disease risk.** *medRxiv : the preprint server for health sciences*
Ramste, M., Weldy, C., Kundu, S., Zhao, Q., Li, D., Brand, K., Sharma, D., Ramste, A., Jagoda, E., Ray, J., Caceres, R. D., Galante, J., Gschwind, et al
2025
- **Decoding human cardiovascular development and disease through single-cell transcriptomic and epigenomic profiling.** *Trends in cell biology*
Dunkenberger, L., Li, D. Y., Karakikes, I., Quertermous, T.
2025

- **Temporal dynamics of gene and protein signatures following volumetric muscle loss.** *Frontiers in cell and developmental biology*
Jain, I., Oropeza, B. P., Hu, C., Chiang, G., Aravindan, S., Reyes, R., Li, D. Y., Cheng, P., Huang, N. F.
2025; 13: 1606609
- **Single cell variant to enhancer to gene map for coronary artery disease.** *medRxiv : the preprint server for health sciences*
Amrute, J. M., Lee, P. C., Eres, I., Lee, C. J., Bredemeyer, A., Sheth, M. U., Yamawaki, T., Gurung, R., Anene-Nzelu, C., Qiu, W. L., Kundu, S., Li, D. Y., Ramste, et al
2024
- **Deciphering the impact of genomic variation on function.** *Nature*
2024; 633 (8028): 47-57
- **Genome-Wide Genetic Associations Prioritize Evaluation of Causal Mechanisms of Atherosclerotic Disease Risk.** *Arteriosclerosis, thrombosis, and vascular biology*
Quertermous, T., Li, D. Y., Weldy, C. S., Ramste, M., Sharma, D., Monteiro, J. P., Gu, W., Worssam, M. D., Palmisano, B. T., Park, C. Y., Cheng, P.
2024; 44 (2): 323-327
- **Relation of Statin Use to Gut Microbial Trimethylamine N-Oxide and Cardiovascular Risk.** *The American journal of cardiology*
Li, D. Y., Li, X. S., Chaikijurajai, T., Li, L., Wang, Z., Hazen, S. L., Tang, W. H.
2022
- **The epigenomic landscape of single vascular cells reflects developmental origin and identifies disease risk loci** *bioRxiv*
Weldy, C. S., Cheng, P. P., Pedroza, A. J., Dalal, A. R., Sharma, D., Kim, H., Shi, H., Nguyen, T., Kundu, R. K., Fischbein, M. P., Quertermous, T.
2022
- **Loop Diuretics Inhibit Renal Excretion of Trimethylamine N-Oxide.** *JACC. Basic to translational science*
Li, D. Y., Wang, Z., Jia, X., Yan, D., Shih, D. M., Hazen, S. L., Lusis, A. J., Tang, W. H.
2021; 6 (2): 103–15
- **Dietary metabolism, the gut microbiome, and heart failure** *NATURE REVIEWS CARDIOLOGY*
Tang, W., Li, D. Y., Hazen, S. L.
2019; 16 (3): 137–54
- **Genetic, dietary, and sex-specific regulation of hepatic ceramides and the relationship between hepatic ceramides and IR** *JOURNAL OF LIPID RESEARCH*
Norheim, F., Bjellaas, T., Hui, S. T., Krishnan, K., Lee, J., Gupta, S., Pan, C., Hasin-Brumshtein, Y., Parks, B. W., Li, D. Y., Bui, H. H., Mosier, M., Wu, et al
2018; 59 (7): 1164–74
- **Oxidative Stress and Cardiovascular Risk in Type 1 Diabetes Mellitus: Insights From the DCCT/EDIC Study** *JOURNAL OF THE AMERICAN HEART ASSOCIATION*
Tang, W., McGee, P., Lachin, J. M., Li, D. Y., Hoogwerf, B., Hazen, S. L., DCCT EDIC Res Grp
2018; 7 (10)
- **RELATIONSHIP BETWEEN STATIN USE AND TRIMETHYLAMINE N-OXIDE IN CARDIOVASCULAR RISK ASSESSMENT**
Li, D. Y., Wang, Z., Li, X. S., Hazen, S. L., Tang, W.
ELSEVIER SCIENCE INC.2018: 115
- **Contributory Role of Gut Microbiota and Their Metabolites Toward Cardiovascular Complications in Chronic Kidney Disease** *SEMINARS IN NEPHROLOGY*
Li, D. Y., Tang, W.
2018; 38 (2): 193–205
- **Gut Microbiota and Atherosclerosis** *CURRENT ATHEROSCLEROSIS REPORTS*
Li, D. Y., Tang, W.
2017; 19 (10): 39
- **Increased Trimethylamine N-Oxide Portends High Mortality Risk Independent of Glycemic Control in Patients with Type 2 Diabetes Mellitus** *CLINICAL CHEMISTRY*
Tang, W., Wang, Z., Li, X. S., Fan, Y., Li, D. S., Wu, Y., Hazen, S. L.

2017; 63 (1): 297–306

- **Autoantibodies Specifically Against beta(1) Adrenergic Receptors and Adverse Clinical Outcome in Patients With Chronic Systolic Heart Failure in the beta-Blocker Era: The Importance of Immunoglobulin G3 Subclass** *JOURNAL OF CARDIAC FAILURE*
Nagatomo, Y., Li, D., Kirsop, J., Borowski, A., Thakur, A., Tang, W. H.
2016; 22 (6): 417–422
- **A Herpes Simplex Virus 2 (HSV-2) gD Mutant Impaired for Neural Tropism Is Superior to an HSV-2 gD Subunit Vaccine To Protect Animals from Challenge with HSV-2** *JOURNAL OF VIROLOGY*
Wang, K., Goodman, K. N., Li, D. Y., Raffeld, M., Chavez, M., Cohen, J. I.
2016; 90 (1): 562–74
- **Listening to Our Gut: Contribution of Gut Microbiota and Cardiovascular Risk in Diabetes Pathogenesis** *CURRENT DIABETES REPORTS*
Li, D., Kirsop, J., Tang, W.
2015; 15 (9): 63
- **Loss of FHL1 induces an age-dependent skeletal muscle myopathy associated with myofibrillar and intermyofibrillar disorganization in mice** *HUMAN MOLECULAR GENETICS*
Domenighetti, A. A., Chu, P., Wu, T., Sheikh, F., Gokhin, D. S., Guo, L. T., Cui, Z., Peter, A. K., Christodoulou, D. C., Parfenov, M. G., Gorham, J. M., Li, D. Y., Banerjee, et al
2014; 23 (1): 209–25
- **Holistic metabonomic profiling of urine affords potential early diagnosis for bladder and kidney cancers** *METABOLOMICS*
Huang, Z., Chen, Y., Hang, W., Gao, Y., Lin, L., Li, D. Y., Xing, J., Yan, X.
2013; 9 (1): 119–29
- **Protein Structure Modeling in a Grid Computing Environment**
Li, D., Tsui, B., Xue, C., Haga, J. H., Ichikawa, K., Date, S., IEEE
IEEE.2013: 301–6