



Daniel Katz

Assistant Professor of Medicine (Computational Medicine)

 Curriculum Vitae available Online

CLINICAL OFFICE (PRIMARY)

- **Cardiovascular Medicine**

300 Pasteur Dr Rm A260

MC 5319

Stanford, CA 94305

Tel (650) 723-6459 **Fax** (650) 723-8392

Bio

BIO

Daniel Katz is an Assistant Professor of Medicine in the Stanford Center for Biomedical Informatics Research (BMIR) and the Cardiovascular Medicine Divisions. He practices as an Advanced Heart Failure and Transplant Cardiologist. He completed internal medicine residency at Massachusetts General Hospital, general cardiology training at Beth Israel Deaconess Medical Center, and then joined Stanford in 2021 for his advanced heart failure training. His research focuses on identifying the various pathophysiologic patterns and mechanisms that lead to the heterogeneous syndrome of heart failure. His efforts leverage high dimensional data in many forms including clinical phenotypes, plasma proteomics, metabolomics, and genetics. He is presently engaged in analysis of multi-omic data from the Molecular Transducers of Physical Activity Consortium (MoTrPAC) and the NHLBI Trans-Omics for Precision Medicine (TOPMed) Program. His clinical interests include advanced heart failure, transplant cardiology, and mechanical circulatory support.

CLINICAL FOCUS

- Cardiac Transplantation
- Heart-Assist Devices
- Heart Failure
- Advanced Heart Failure and Transplant Cardiology

ACADEMIC APPOINTMENTS

- Assistant Professor - University Medical Line, Computational Medicine
- Member (Postdoc), Cardiovascular Institute
- Member, Wu Tsai Human Performance Alliance

PROFESSIONAL EDUCATION

- Board Certification: Advanced Heart Failure and Transplant Cardiology, American Board of Internal Medicine (2022)
- Fellowship: Stanford University Advanced Heart Failure and Transplant Fellowship (2022) CA
- Board Certification: Cardiovascular Disease, American Board of Internal Medicine (2020)

- Fellowship, Beth Israel Deaconess Medical Center Harvard Medical School , MA (2020)
- Board Certification: Internal Medicine, American Board of Internal Medicine (2017)
- Residency: Massachusetts General Hospital Internal Medicine Residency (2017) MA
- Medical Education: Northwestern University Feinberg School of Medicine (2014) IL

Research & Scholarship

CLINICAL TRIALS

- Identifying Markers of Exercise Training in Heart Failure, Recruiting

Teaching

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Pauline Brochet

Publications

PUBLICATIONS

- **The Common Fund Data Ecosystem (CFDE).** *bioRxiv : the preprint server for biology*
Jurgens, J. A., Bueckle, A., Vora, J., Maurya, M. R., Ahooyi, T. M., Zheng, E., Stear, B., Wang, D., Ree, C., Ramachandran, S., Nekrutenko, A., Brandes, M., Thaker, et al
2026
- **Plasma Proteins Associated With Psychosocial Factors and Heart Disease: The Jackson Heart Study.** *Arteriosclerosis, thrombosis, and vascular biology*
O'Brien, S. N., Gillman, M. G., Green, M. D., Cruz, D. E., Floyd, J. S., Hankinson, S., Katz, D. H., Liu, X., Odden, M. C., Psaty, B. M., Reiner, A. P., Rotter, J. I., Rich, et al
2026
- **Blood Biochemical Responses to Acute Exercise: Findings from the Molecular Transducers of Physical Activity Consortium (MoTrPAC).** *bioRxiv : the preprint server for biology*
Robbins, J. M., Katz, D. H., Many, G. M., Rao, P., Smith, G. R., Tiwari, G., Jin, C., Spielmann, G., Montalvo, S., Iyer, G., Amar, D., Leach, D., Coyne, et al
2026
- **Integrative Multi-omics Analysis of the Human Skeletal Muscle Response to Endurance or Resistance Exercise: Findings from the Molecular Transducers of Physical Activity Consortium (MoTrPAC).** *bioRxiv : the preprint server for biology*
Keshishian, H., Many, G. M., Smith, G., Clark, N. M., Iyer, G., Hart, P., Lindholm, M. E., Montalvo, S., Zhang, Z., Jin, C., Sanford, J. A., Carr, S. A., Adkins, et al
2026
- **Exercise modulation of the alternative splicing landscape in human tissues.** *bioRxiv : the preprint server for biology*
Zhang, Z., Nudelman, G., Pincas, H., Iyer, G., Smith, G. R., Keshishian, H., Jin, C. A., Trappe, S., Katz, D. H., Burant, C. F., Nair, V. D., Zaslavsky, E., Sealfon, et al
2026
- **Cross-ancestry comparison of aptamer and antibody protein measures.** *Nature communications*
Nicholas, J. C., Katz, D. H., Tahir, U. A., Debban, C. L., Aguet, F., Blackwell, T., Bowler, R. P., Broadaway, K. A., Chen, J., Clish, C. B., Coresh, J., Cornell, E., Cruz, et al
2026
- **Human plasma proteomic profile of clonal hematopoiesis.** *Nature communications*
Yu, Z., Vromman, A., Nguyen, N. Q., Schuermans, A., Li, L., Rentz, T., Nakao, T., Vellarikkal, S. K., Uddin, M. M., Niroula, A., Griffin, G., Honigberg, M. C., Lin, et al

2025

- **Integrative analysis of MoTrPAC and LINCS transcriptomes identifies cardiovascular-relevant exercise-mimetic drugs**
Brochet, P., Jimenez-Morales, D., Lindholm, M., Wheeler, M., Katz, D.
LIPPINCOTT WILLIAMS & WILKINS.2025
- **Integrated Multi-omics Analysis of Skeletal Muscle in Response to a Bout of Resistance or Endurance Exercise**
Iyer, G., Smith, G., Many, G., Clark, N., Jin, C., Montalvo Hernandez, S., Thalacker-Mercer, A., Houmard, J., Bergman, B., Nie, J., Espinoza, S., Trappe, S., Sparks, et al
LIPPINCOTT WILLIAMS & WILKINS.2025
- **Causal Proteomic Consequences of Clonal Hematopoiesis: Integrated Human Genetic and Murine Validation**
Yu, Z., Vromman, A., Nguyen, N., Schuermans, A., Li, L., Rentz, T., Vellarikkal, S., Uddin, M., Niroula, A., Griffin, G., Honigberg, M., Lin, A., Gibson, et al
LIPPINCOTT WILLIAMS & WILKINS.2025
- **Multi-omics analysis of endurance exercise reveals cardioprotective remodeling in rat heart**
Brochet, P., Njoroge, J., Montalvo Hernandez, S., Lindholm, M., Smith, G., Amar, D., Gay, N., Zhao, B., Hung, C., Jin, C., Chavez, C., Nachun, D., Zaslavsky, et al
LIPPINCOTT WILLIAMS & WILKINS.2025
- **Accelerating the translation of findings from the MoTrPAC study to benefit clinical care: a qualitative analysis.** *BMC primary care*
Collins-Bennett, K. A., Lacci-Reilly, K. R., Aguilar, A., Fleg, J. L., George, S. M., Houmard, J. A., Huffman, K. M., Johannsen, N. M., Katz, D. H., Narendra, J., Radow-Aizik, S., Sparks, L. M., Xia, et al
2025; 26 (1): 324
- **Endurance Training Enhances Sex-Specific Cardioprotective Metabolism.** *Circulation research*
Brochet, P., Montalvo, S., Lindholm, M. E., Jimenez-Morales, D., Jin, C. A., Rasmussen, B. B., Kraus, W. E., Yan, Z., Wheeler, M. T., Katz, D. H.
2025
- **Cross-Ancestry Comparison of Aptamer and Antibody Proteomics Measures.** *Research square*
Nicholas, J. C., Katz, D. H., Tahir, U. A., Debban, C. L., Aguet, F., Blackwell, T., Bowler, R. P., Broadaway, K. A., Chen, J., Clish, C. B., Coresh, J., Cornell, E., Cruz, et al
2025
- **Cross-Population Comparison of Aptamer and Antibody Proteomics Measures**
Nicholas, J., Katz, D., Tahir, U. A., Debban, C. L., Aguet, F., Blackwell, T., Bowler, R. P., Chen, J., Clish, C. B., Coresh, J., Cornell, E., Cruz, D. E., Deo, et al
SPRINGER NATURE.2024: 1701-1702
- **Cross-Population Comparison of Aptamer and Antibody Proteomics Measures**
Nicholas, J., Katz, D., Tahir, U. A., Debban, C. L., Aguet, F., Blackwell, T., Bowler, R. P., Chen, J., Clish, C. B., Coresh, J., Cornell, E., Cruz, D. E., Deo, et al
SPRINGER NATURE.2024: 1701-1702
- **Human Plasma Proteomic Profile of Clonal Hematopoiesis.** *bioRxiv : the preprint server for biology*
Yu, Z., Vromman, A., Nguyen, N. Q., Schuermans, A., Rentz, T., Vellarikkal, S. K., Uddin, M. M., Niroula, A., Griffin, G., Honigberg, M. C., Lin, A. E., Gibson, C. J., Katz, et al
2024
- **Proteogenomic analysis integrated with electronic health records data reveals disease-associated variants in Black Americans.** *The Journal of clinical investigation*
Tahir, U. A., Barber, J. L., Cruz, D. E., Kars, M. E., Deng, S., Tuftin, B., Gillman, M. G., Benson, M. D., Robbins, J. M., Chen, Z. Z., Rao, P., Katz, D. H., Farrell, et al
2024
- **Charting the Molecular Terrain of Exercise: The Power of Multi-Omic Mapping.** *Physiology (Bethesda, Md.)*
Katz, D. H., Lindholm, M. E., Ashley, E. A.
2024
- **The mitochondrial multi-omic response to exercise training across rat tissues.** *Cell metabolism*

Amar, D., Gay, N. R., Jimenez-Morales, D., Jean Beltran, P. M., Ramaker, M. E., Raja, A. N., Zhao, B., Sun, Y., Marwaha, S., Gaul, D. A., Hershman, S. G., Ferrasse, A., Xia, et al

2024

- **Plasma proteomic changes in response to exercise training are associated with cardiorespiratory fitness adaptations.** *JCI insight*
Robbins, J. M., Rao, P., Deng, S., Keyes, M. J., Tahir, U. A., Katz, D. H., Beltran, P. M., Marchildon, F., Barber, J. L., Peterson, B., Gao, Y., Correa, A., Wilson, et al
2023; 8 (7)
- **Nontargeted and Targeted Metabolomic Profiling Reveals Novel Metabolite Biomarkers of Incident Diabetes in African Americans.** *Diabetes*
Chen, Z., Pacheco, J. A., Gao, Y., Deng, S., Peterson, B., Shi, X., Zheng, S., Tahir, U. A., Katz, D. H., Cruz, D. E., Ngo, D., Benson, M. D., Robbins, et al
2022
- **Whole Genome Association Study of the Plasma Metabolome Identifies Metabolites Linked to Cardiometabolic Disease in Black Individuals.** *Nature communications*
Tahir, U. A., Katz, D. H., Avila-Pachecho, J., Bick, A. G., Pampana, A., Robbins, J. M., Yu, Z., Chen, Z., Benson, M. D., Cruz, D. E., Ngo, D., Deng, S., Shi, et al
2022; 13 (1): 4923
- **Proteomic profiling platforms head to head: Leveraging genetics and clinical traits to compare aptamer- and antibody-based methods** *SCIENCE ADVANCES*
Katz, D. H., Robbins, J. M., Deng, S., Tahir, U. A., Bick, A. G., Pampana, A., Yu, Z., Ngo, D., Benson, M. D., Chen, Z., Cruz, D. E., Shen, D., Gao, et al
2022; 8 (33): eabm5164
- **Proteomics and Population Biology in the Cardiovascular Health Study (CHS): design of a study with mentored access and active data sharing.** *European journal of epidemiology*
Austin, T. R., McHugh, C. P., Brody, J. A., Bis, J. C., Sitlani, C. M., Bartz, T. M., Biggs, M. L., Bansal, N., Buzkova, P., Carr, S. A., deFilippi, C. R., Elkind, M. S., Fink, et al
2022
- **Whole Genome Sequence Analysis of the Plasma Proteome in Black Adults Provides Novel Insights Into Cardiovascular Disease.** *Circulation*
Katz, D. H., Tahir, U. A., Bick, A. G., Pampana, A., Ngo, D., Benson, M. D., Yu, Z., Robbins, J. M., Chen, Z., Cruz, D. E., Deng, S., Farrell, L., Sinha, et al
2022; 145 (5): 357-370
- **Proteomics in Heart Failure: From Benchtop to Bedside.** *Journal of cardiac failure*
Katz, D. H., Thompson, A. D.
1800
- **Human plasma proteomic profiles indicative of cardiorespiratory fitness (vol 3, pg 786, 2021) NATURE METABOLISM**
Robbins, J. M., Peterson, B., Schraner, D., Tahir, U. A., Rienmuller, T., Deng, S., Keyes, M. J., Katz, D. H., Beltran, P., Barber, J. L., Baumgartner, C., Carr, S. A., Ghosh, et al
2021; 3 (9): 1275
- **Multiomic Profiling in Black and White Populations Reveals Novel Candidate Pathways in Left Ventricular Hypertrophy and Incident Heart Failure Specific to Black Adults** *CIRCULATION-GENOMIC AND PRECISION MEDICINE*
Katz, D. H., Tahir, U. A., Ngo, D., Benson, M. D., Gao, Y., Shi, X., Naylor, M., Keyes, M. J., Larson, M. G., Hall, M. E., Correa, A., Sinha, S., Shen, et al
2021; 14 (3): 348-358
- **Human plasma proteomic profiles indicative of cardiorespiratory fitness** *NATURE METABOLISM*
Robbins, J. M., Peterson, B., Schraner, D., Tahir, U. A., Rienmuller, T., Deng, S., Keyes, M. J., Katz, D. H., Beltran, P., Barber, J. L., Baumgartner, C., Carr, S. A., Ghosh, et al
2021; 3 (6): 786-+
- **Proteomic profiling reveals novel biomarkers and pathways in type 2 diabetes risk.** *JCI insight*
Ngo, D. n., Benson, M. D., Long, J. Z., Chen, Z. Z., Wang, R. n., Nath, A. K., Keyes, M. J., Shen, D. n., Sinha, S. n., Kuhn, E. n., Morningstar, J. E., Shi, X. n., Peterson, et al
2021

- **Metabolomic Profiles and Heart Failure Risk in Black Adults: Insights From the Jackson Heart Study** *CIRCULATION-HEART FAILURE*
Tahir, U. A., Katz, D. H., Zhao, T., Ngo, D., Cruz, D. E., Robbins, J. M., Chen, Z., Peterson, B., Benson, M. D., Shi, X., Dailey, L., Andersson, C., Vasan, et al
2021; 14 (1): 28-38
- **Circulating testican-2 is a podocyte-derived marker of kidney health** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Ngo, D., Wen, D., Gao, Y., Keyes, M. J., Drury, E. R., Katz, D. H., Benson, M. D., Sinha, S., Shen, D., Farrell, L. A., Peterson, B. D., Friedman, D. J., Elmariah, et al
2020; 117 (40): 25026-25035
- **Proteomic Profiling in Biracial Cohorts Implicates DC-SIGN as a Mediator of Genetic Risk in COVID-19.** *medRxiv : the preprint server for health sciences*
Katz, D. H., Tahir, U. A., Ngo, D., Benson, M. D., Bick, A. G., Pampana, A., Gao, Y., Keyes, M. J., Correa, A., Sinha, S., Shen, D., Yang, Q., Robbins, et al
2020
- **Mining a GWAS of Severe Covid-19** *New England Journal of Medicine*
Katz, D. H., Wilson, J. G., Gerszten, R. E.
2020; 383: 2588-2589
- **In the Clinic Stable Ischemic Heart Disease** *ANNALS OF INTERNAL MEDICINE*
Katz, D., Gavin, M. C.
2019; 171 (3): ITC17-U136
- **A Role for Branched-Chain Amino Acids in the Pathophysiology of Diabetes: Using Data to Guide Discovery** *CLINICAL CHEMISTRY*
Katz, D. H., Gerszten, R. E.
2018; 64 (8): 1250-1251
- **Phenomapping for the Identification of Hypertensive Patients with the Myocardial Substrate for Heart Failure with Preserved Ejection Fraction** *JOURNAL OF CARDIOVASCULAR TRANSLATIONAL RESEARCH*
Katz, D. H., Deo, R. C., Aguilar, F. G., Selvaraj, S., Martinez, E. E., Beussink-Nelson, L., Kim, K. A., Peng, J., Irvin, M. R., Tiwari, H., Rao, D. C., Arnett, D. K., Shah, et al
2017; 10 (3): 275-284
- **Archeological Echocardiography: Digitization and Speckle Tracking Analysis of Archival Echocardiograms in the HyperGEN Study** *ECHOCARDIOGRAPHY-A JOURNAL OF CARDIOVASCULAR ULTRASOUND AND ALLIED TECHNIQUES*
Aguilar, F. G., Selvaraj, S., Martinez, E. E., Katz, D. H., Beussink, L., Kim, K. A., Ping, J., Rasmussen-Torvik, L., Goyal, A., Sha, J., Irvin, M. R., Arnett, D. K., Shah, et al
2016; 33 (3): 386-397
- **Association of Chronic Kidney Disease With Chronotropic Incompetence in Heart Failure With Preserved Ejection Fraction** *AMERICAN JOURNAL OF CARDIOLOGY*
Klein, D. A., Katz, D. H., Beussink-Nelson, L., Sanchez, C. L., Strzelczyk, T. A., Shah, S. J.
2015; 116 (7): 1093-1100
- **Phenomapping for Novel Classification of Heart Failure With Preserved Ejection Fraction** *CIRCULATION*
Shah, S. J., Katz, D. H., Selvaraj, S., Burke, M. A., Yancy, C. W., Gheorghide, M., Bonow, R. O., Huang, C., Deo, R. C.
2015; 131 (3): 269+
- **Albuminuria Is Independently Associated With Cardiac Remodeling, Abnormal Right and Left Ventricular Function, and Worse Outcomes in Heart Failure With Preserved Ejection Fraction** *JACC-HEART FAILURE*
Katz, D. H., Burns, J. A., Aguilar, F. G., Beussink, L., Shah, S. J.
2014; 2 (6): 586-596
- **Addressing Statin Adverse Effects in the Clinic: The 5 Ms** *JOURNAL OF CARDIOVASCULAR PHARMACOLOGY AND THERAPEUTICS*
Katz, D. H., Intwala, S. S., Stone, N. J.
2014; 19 (6): 533-542
- **Phenotypic Spectrum of Heart Failure with Preserved Ejection Fraction** *HEART FAILURE CLINICS*
Shah, S. J., Katz, D. H., Deo, R. C.

2014; 10 (3): 407-+

- **Aggressive Lipid Management in Very Elderly Adults: Less Is More Response** *JOURNAL OF THE AMERICAN GERIATRICS SOCIETY*
Stone, N. J., Intwala, S., Katz, D.
2014; 62 (5): 947-948
- **Statins in Very Elderly Adults (Debate)** *JOURNAL OF THE AMERICAN GERIATRICS SOCIETY*
Stone, N. J., Intwala, S., Katz, D.
2014; 62 (5): 943-945
- **Prognostic Importance of Pathophysiologic Markers in Patients With Heart Failure and Preserved Ejection Fraction** *CIRCULATION-HEART FAILURE*
Burke, M. A., Katz, D. H., Beussink, L., Selvaraj, S., Gupta, D. K., Fox, J., Chakrabarti, S., Sauer, A. J., Rich, J. D., Freed, B. H., Shah, S. J.
2014; 7 (2): 288-299
- **Association of Low-Grade Albuminuria With Adverse Cardiac Mechanics Findings From the Hypertension Genetic Epidemiology Network (HyperGEN) Study** *CIRCULATION*
Katz, D. H., Selvaraj, S., Aguilar, F. G., Martinez, E. E., Beussink, L., Kim, K. A., Peng, J., Sha, J., Irvin, M. R., Eckfeldt, J. H., Turner, S. T., Freedman, B. I., Arnett, et al
2014; 129 (1): 42-+
- **Prevalence, Clinical Characteristics, and Outcomes Associated With Eccentric Versus Concentric Left Ventricular Hypertrophy in Heart Failure With Preserved Ejection Fraction** *AMERICAN JOURNAL OF CARDIOLOGY*
Katz, D. H., Beussink, L., Sauer, A. J., Freed, B. H., Burke, M. A., Shah, S. J.
2013; 112 (8): 1158-1164