

# Stanford

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## Arianne Caudal

Postdoctoral Scholar, Cardiovascular Institute

### Bio

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#### BIO

Dr. Arianne Caudal is a postdoctoral fellow at the Stanford Cardiovascular Institute with research interests in cardiac metabolism, disease modeling, and drug discovery. Dr. Caudal received her PhD in Biochemistry from the University of Washington, after conducting thesis work on mitochondrial metabolism and protein-protein interactions in the heart.

#### HONORS AND AWARDS

- Postdoctoral Fellowship, American Heart Association (2022)
- Postdoctoral Seed Grant, Cambridge Isotopes (2022)
- TRAM Pilot Grant, Stanford University (2022)
- SUMS Training Seed Award, Stanford University (2021)
- Three Minute Thesis People's Choice Award, University of Washington (2021)
- Predoctoral Fellowship, American Heart Association (2020-2022)

#### STANFORD ADVISORS

- Joseph Wu, Postdoctoral Faculty Sponsor

### Publications

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#### PUBLICATIONS

- **Tachycardia-induced metabolic rewiring as a driver of contractile dysfunction.** *Nature biomedical engineering*  
Tu, C., Caudal, A., Liu, Y., Gorgodze, N., Zhang, H., Lam, C. K., Dai, Y., Zhang, A., Wnorowski, A., Wu, M. A., Yang, H., Abilez, O. J., Lyu, et al  
2023
- **Harnessing human genetics and stem cells for precision cardiovascular medicine** *Cell Genomics*  
Caudal, A., Snyder, M. P., Wu, J. C.  
2023
- **Mitochondrial interactome quantitation reveals structural changes in metabolic machinery in the failing murine heart.** *Nature cardiovascular research*  
Caudal, A., Tang, X., Chavez, J. D., Keller, A., Mohr, J. P., Bakhtina, A. A., Villet, O., Chen, H., Zhou, B., Walker, M. A., Tian, R., Bruce, J. E.  
2022; 1 (9): 855-866
- **Generation of human induced pluripotent stem cell lines carrying heterozygous PLN mutation from dilated cardiomyopathy patients.** *Stem cell research*  
Caudal, A., Mondejar-Parreno, G., Vera, C. D., Williams, D. R., Shenoy, S. P., Liang, D., Wu, J. C.  
2022; 63: 102855
- **Human Induced Pluripotent Stem Cells for Studying Mitochondrial Diseases in the Heart.** *FEBS letters*

Caudal, A., Ren, L., Tu, C., Wu, J. C.

2022

- **Upregulation of mitochondrial ATPase inhibitory factor 1 (ATPIF1) mediates increased glycolysis in mouse hearts.** *The Journal of clinical investigation* Zhou, B., Caudal, A., Tang, X., Chavez, J. D., McMillen, T. S., Keller, A., Villet, O., Zhao, M., Liu, Y., Ritterhoff, J., Wang, P., Kolwicz, S. C., Wang, et al 2022; 132 (10)
- **Increasing fatty acid oxidation elicits a sex-dependent response in failing mouse hearts.** *Journal of molecular and cellular cardiology* Ritterhoff, J., McMillen, T. S., Villet, O., Young, S., Kolwicz, S. C., Senn, T., Caudal, A., Tian, R. 2021; 158: 1-10
- **Increasing Fatty Acid Oxidation Prevents High-Fat Diet-Induced Cardiomyopathy Through Regulating Parkin-Mediated Mitophagy.** *Circulation* Shao, D., Kolwicz, S. C., Wang, P., Roe, N. D., Villet, O., Nishi, K., Hsu, Y. A., Flint, G. V., Caudal, A., Wang, W., Regnier, M., Tian, R. 2020; 142 (10): 983-997
- **A novel approach to measure mitochondrial respiration in frozen biological samples.** *The EMBO journal* Acin-Perez, R., Benador, I. Y., Petcherski, A., Veliova, M., Benavides, G. A., Lagarrigue, S., Caudal, A., Vergnes, L., Murphy, A. N., Karamanlidis, G., Tian, R., Reue, K., Wanagat, et al 2020; 39 (13): e104073
- **Targeting NAD+ Metabolism as Interventions for Mitochondrial Disease.** *Scientific reports* Lee, C. F., Caudal, A., Abell, L., Nagana Gowda, G. A., Tian, R. 2019; 9 (1): 3073
- **Chemical Crosslinking Mass Spectrometry Analysis of Protein Conformations and Supercomplexes in Heart Tissue.** *Cell systems* Chavez, J. D., Lee, C. F., Caudal, A., Keller, A., Tian, R., Bruce, J. E. 2018; 6 (1): 136-141.e5
- **Mitochondrial protein interactome elucidated by chemical cross-linking mass spectrometry.** *Proceedings of the National Academy of Sciences of the United States of America* Schweppe, D. K., Chavez, J. D., Lee, C. F., Caudal, A., Kruse, S. E., Stuppard, R., Marcinek, D. J., Shadel, G. S., Tian, R., Bruce, J. E. 2017; 114 (7): 1732-1737