Stanford



Won suk Jahng

- Instructor, Cardiovascular Institute
- Instructor, Cardiovascular Institute Operations

Bio

ACADEMIC APPOINTMENTS

- Instructor, Cardiovascular Institute
- Member, Maternal & Child Health Research Institute (MCHRI)

HONORS AND AWARDS

- Stanford Cardiovascular Institute Seed Grant, Stanford University (2024-)
- K99/R00 Career Transition Award/Research Transition Award, NIH/NHLBI (2024-)
- TRISH Postdoctoral Fellowship, TRISH/NASA (2021-2023)
- TRAM pilot grant, Stanford University (2021-2022)

PROFESSIONAL EDUCATION

- PhD, York University , Biology (2020)
- BSc, University of Toronto , Biology (2010)

Publications

PUBLICATIONS

- **TRAIL promotes ionizing radiation-induced arrhythmogenic dysfunction in human iPSC-derived cardiomyocytes.** *Cardiovascular research*
  Gao, J., Jahng, J. W., Rana, Z. S., Chen, Y. I., Hu, E., Wu, D., Fernandez, H. M., Cao, X., Wu, J. C.
  2026
- **Consequences of ionizing radiation exposure to the cardiovascular system.** *Nature reviews. Cardiology*
  Jahng, J. W., Little, M. P., No, H. J., Loo, B. W., Wu, J. C.
  2024
- **The role of metabolism in directed differentiation versus trans-differentiation of cardiomyocytes.** *Seminars in cell & developmental biology*
  Jahng, J. W., Zhang, M., Wu, J. C.
  2021
- **Generation of two human induced pluripotent stem cell lines from patients with hypokalemic periodic paralysis.** *Stem cell research*
  Fernandez, H. M., Jahng, J. W., Li, D., Zhou, Y., Wu, J. C.
  2026; 96: 104106
- **Myeloid cell replacement induces intercellular mitochondrial transfer and restores metabolism in a mouse model of mitochondrial disease.** *Nature communications*
  Cho, H., Sayana, R., Koladiya, A., Colella, P., Cho, S., Jahng, J. W., Vasquez, J. J., Arozqueta Basurto, J., Wu, J. C., Gomez-Ospina, N.
  2026; 17 (1)

- **SIRT3 Activator Honokiol Prevents Cardiac Dysfunction After Thoracic Irradiation via Mitochondrial Homeostasis**
  Jahng, J., Gao, J., Achter, J., Cho, S., Cao, X., Jousma, J., Wu, D., Hu, E., Whitmore, L., Dirbas, F., Loo, B., Lundby, A., Wu, et al
  LIPPINCOTT WILLIAMS & WILKINS.2026: ATue056

- **Beta-Adrenergic Stimulation and MYH7 G256E Mutant Gene Dosage Drive Hypertrophic Cardiomyopathy Phenotype Penetrance.** *bioRxiv : the preprint server for biology*
  Heinrich, P., Jung, R. M., Achter, J. S., Nguyen, V. X., Lee, C. A., Sailer, C., Domian, H., Vander Roest, A., Suchy, F. P., Jahng, J. W., Kojic, A., Lee, D., Paasche, et al
  2026

- **Colocalization and functional analyses identify GBE1 as a gene linking muscle strength and cardiometabolic fitness.** *American journal of physiology. Endocrinology and metabolism*
  Schnurr, T. M., Johnson, M. L., Jin, C., Sørensen, K. V., Kim, L., Jahng, J. W., Ramste, A., Bielczyk-Maczynska, E., Gloudemans, M. J., Saliba-Gustafsson, P., Vinton, E., Jurney, P. L., Carcamo-Orive, et al
  2026

- **Inhibition of CXCL10 and IFN-γ ameliorates myocarditis in preclinical models of SARS-CoV-2 mRNA vaccination.** *Science translational medicine*
  Cao, X., Manhas, A., Chen, Y. I., Caudal, A., Mondejar-Parreño, G., Zhu, W., Liu, W., Kong, X., Zeng, W., Liu, L., Zhao, S. R., Jahng, J. W., Utz, et al
  2025; 17 (828): eadq0143

- **Age-related microbiome metabolites alter RNA splicing and chromatin accessibility in the brain.** *bioRxiv : the preprint server for biology*
  Chakraborty, M., Shi, S. M., Porter, I. E., Richard, D. J., Marinov, G. K., Moore, A. A., Blum, J. L., Natarajan, A., Jahng, J. W., Wu, J. C., Lu, S. X., Davidson, S. M., Greenleaf, et al
  2025

- **Investigating the Risk of Arrhythmogenesis Associated With Fentanyl Abuse Using Human and Mouse Cardiomyocytes.** *Circulation*
  Mondéjar-Parreño, G., Zhao, S. R., Cao, X., Liu, Y., Yang, J. Y., Jahng, J. W., Leitz, J., Wu, D., Sayed, N., Jalife, J., Wu, J. C.
  2025; 152 (8): 563-566

- **Selective inhibition of stromal mechanosensing suppresses cardiac fibrosis.** *Nature*
  Cho, S., Rhee, S., Madl, C. M., Caudal, A., Thomas, D., Kim, H., Kojic, A., Shin, H. S., Mahajan, A., Jahng, J. W., Wang, X., Thai, P. N., Paik, et al
  2025

- **Generation of two induced pluripotent stem cell lines to model and investigate diseases affecting Pacific Islanders.** *Stem cell research*
  Zhang, A., Jahng, J. W., Guevara, J. V., Yan, C. D., McConnell, M. V., Wu, J. C.
  2025; 83: 103668

- **Laminin: guardian against DNA damage by transcription stress.** *Cardiovascular research*
  Jahng, J. W., Wu, J. C.
  2024

- **Generation of induced pluripotent stem cell lines from patients with LQT1 caused by heterozygous mutations in the KCNQ1 gene.** *Stem cell research*
  Ren, L., Jahng, J. W., Belbachir, N., Cook, Z., Rivero, G. C., Perez, M. V., Wu, J. C.
  2024; 78: 103443

- **Incomplete-penetrant hypertrophic cardiomyopathy MYH7 G256E mutation causes hypercontractility and elevated mitochondrial respiration.** *Proceedings of the National Academy of Sciences of the United States of America*
  Lee, S., Vander Roest, A. S., Blair, C. A., Kao, K., Bremner, S. B., Childers, M. C., Pathak, D., Heinrich, P., Lee, D., Chirikian, O., Mohran, S. E., Roberts, B., Smith, et al
  2024; 121 (19): e2318413121

- **Elucidating effects of the environmental pollutant benzo[a]pyrene [BaP] on cardiac arrhythmogenicity.** *Journal of molecular and cellular cardiology*
  Yang, J. Y., Mondéjar-Parreño, G., Jahng, J. W., Lu, Y., Hamburg, N., Nadeau, K. C., Conklin, D. J., Liao, R., Chandy, M., Wu, J. C.
  2024; 191: 23-26

- **Ischemia-induced cardiac dysfunction is exacerbated in adiponectin-knockout mice due to impaired autophagy flux** *CTS-CLINICAL AND TRANSLATIONAL SCIENCE*
  Sung, H., Tang, J., Jahng, J., Song, E., Chan, Y., Lone, A., Peterson, J., Abdul-Sater, A., Sweeney, G.

2024; 17 (3): e13758

- **Extracellular Vesicles Derived FromEntamoeba histolyticaHave an Immunomodulatory Effect on THP-1 Macrophages.** *Journal of parasitology research*
  Chowdhury, D., Sharma, M., Jahng, J. W., Singh, U.
  2024; 2024: 7325606

- **Generation of two induced pluripotent stem cell lines from patients suffering from pulmonary hypertension.** *Stem cell research*
  Chen, G., Orozco, L., Parmisano, S., Jahng, J. W., Vera, C. D., Zhuge, Y., Wu, J. C., Obal, D.
  2023; 72: 103218

- **SGLT2 inhibitor ameliorates endothelial dysfunction associated with the common ALDH2 alcohol flushing variant.** *Science translational medicine*
  Guo, H., Yu, X., Liu, Y., Paik, D. T., Justesen, J. M., Chandy, M., Jahng, J. W., Zhang, T., Wu, W., Rwere, F., Zhao, S. R., Pokhrel, S., Shivnaraine, et al
  2023; 15 (680): eabp9952

- **Ferroptosis of Pacemaker Cells in COVID-19.** *Circulation research*
  Nishiga, M., Jahng, J. W., Wu, J. C.
  2022; 130 (7): 978-980

- **Generation of two iPSC lines from hypertrophic cardiomyopathy patients carrying MYBPC3 and PRKAG2 variants.** *Stem cell research*
  Manhas, A., Jahng, J. W., Vera, C. D., Shenoy, S. P., Knowles, J. W., Wu, J. C.
  2022; 61: 102774

- **Cardiac reprogramming via chromatin remodeling by CRISPR activation.** *Molecular therapy : the journal of the American Society of Gene Therapy*
  Jahng, J. W., Wu, J. C.
  1800

- **Generation of three induced pluripotent stem cell lines (SCVIi014-A, SCVIi015-A, and SCVIi016-A) from patients with LQT1 caused by heterozygous mutations in the KCNQ1 gene.** *Stem cell research*
  Zhang, H., Jahng, J. W., Liu, Y., Chase, A. J., Perez, M. V., Wu, J. C.
  2021; 55: 102492

- **Generation of three induced pluripotent stem cell lines from hypertrophic cardiomyopathy patients carrying MYH7 mutations.** *Stem cell research*
  Cao, X., Jahng, J. W., Lee, C., Zha, Y., Wheeler, M. T., Sallam, K., Wu, J. C.
  2021; 55: 102455

- **Generation of three heterozygous KCNH2 mutation-carrying human induced pluripotent stem cell lines for modeling LQT2 syndrome.** *Stem cell research*
  Mondejar-Parreno, G., Jahng, J. W., Belbachir, N., Wu, B. C., Zhang, X., Perez, M. V., Badhwar, N., Wu, J. C.
  2021; 54: 102402

- **Generation of three induced pluripotent stem cell lines, SCVIi003-A, SCVIi004-A, SCVIi005-A, from patients with ARVD/C caused by heterozygous mutations in the PKP2 gene.** *Stem cell research*
  Jahng, J. W., Black, K. E., Liu, L., Bae, H. R., Perez, M., Ashley, E. A., Sallam, K., Wu, J. C.
  2021; 53: 102284

- **Generation of two heterozygous MYBPC3 mutation-carrying human iPSC lines, SCVIi001-A and SCVIi002-A, for modeling hypertrophic cardiomyopathy.** *Stem cell research*
  Liu, L., Shenoy, S. P., Jahng, J. W., Liu, Y., Knowles, J. W., Zhuge, Y., Wu, J. C.
  2021; 53: 102279

- **Tumor Repressor Circular RNA as a New Target for Preventative Gene Therapy Against Doxorubicin-Induced Cardiotoxicity.** *Circulation research*
  Jahng, J. W., Liu, L. n., Wu, J. C.
  2020; 127 (4): 483–85

- **Empagliflozin Blunts Worsening Cardiac Dysfunction Associated With Reduced NLRP3 (Nucleotide-Binding Domain-Like Receptor Protein 3) Inflammasome Activation in Heart Failure** *CIRCULATION-HEART FAILURE*

Byrne, N. J., Matsumura, N., Maayah, Z. H., Ferdaoussi, M., Takahara, S., Darwesh, A. M., Levasseur, J. L., Jahng, J., Vos, D., Parajuli, N., El-Kadi, A. O. S., Braam, B., Young, et al
2020; 13 (1): e006277

- **Iron overload inhibits late stage autophagic flux leading to insulin resistance** *EMBO REPORTS*
  Jahng, J., Alsaadi, R., Palanivel, R., Song, E., Hipolito, V., Sung, H., Botelho, R., Russell, R., Sweeney, G.
  2019; 20 (10): e47911
- **Iron induces insulin resistance in cardiomyocytes via regulation of oxidative stress** *SCIENTIFIC REPORTS*
  Sung, H., Song, E., Sukjahng, J., Pantopoulos, K., Sweeney, G.
  2019; 9: 4668
- **Lipocalin-2 (NGAL) Attenuates Autophagy to Exacerbate Cardiac Apoptosis Induced by Myocardial Ischemia** *JOURNAL OF CELLULAR PHYSIOLOGY*
  Sung, H., Chan, Y., Han, M., Jahng, J., Song, E., Danielson, E., Berger, T., Mak, T. W., Sweeney, G.
  2017; 232 (8): 2125-2134
- **Lipocalin-2 induces NLRP3 inflammasome activation via HMGB1 induced TLR4 signaling in heart tissue of mice under pressure overload challenge** *AMERICAN JOURNAL OF TRANSLATIONAL RESEARCH*
  Song, E., Jahng, J. W. S., Chong, L. P., Sung, H. K., Han, M., Luo, C., Wu, D., Boo, S., Hinz, B., Cooper, M. A., Robertson, A. A. B., Berger, T., Mak, et al
  2017; 9 (6): 2723-2735
- **Lipocalin-2 inhibits autophagy and induces insulin resistance in H9c2 cells** *MOLECULAR AND CELLULAR ENDOCRINOLOGY*
  Chan, Y., Sung, H., Jahng, J., Kim, G., Han, M., Sweeney, G.
  2016; 430 (C): 68-76
- **Crosstalk between the heart and peripheral organs in heart failure** *EXPERIMENTAL AND MOLECULAR MEDICINE*
  Jahng, J., Song, E., Sweeney, G.
  2016; 48: e217