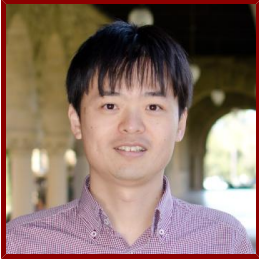


# Stanford

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## Masataka Nishiga

Instructor, Cardiovascular Institute

### Bio

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#### BIO

Dr. Nishiga is an Instructor at the Stanford Cardiovascular Institute. As a physician-scientist, he focuses on unraveling the mechanisms of cardiovascular diseases and developing innovative treatments. His research path was sparked by firsthand experiences with heart failure patients during his clinical practice, where he recognized the urgent need for more effective treatments. After completing his cardiology fellowship in Japan, he pursued a Ph.D. at Kyoto University, focusing on the role of microRNAs and non-coding RNAs in heart failure, cardiac fibrosis, and atherosclerosis. Currently at Stanford and under the guidance of Dr. Joseph Wu, Dr. Nishiga's postdoctoral research leverages iPSCs and CRISPR technology. His primary research areas include the cardiac impacts of cancer therapies, the cardiovascular effects of COVID-19, and the influence of marijuana use on vascular inflammation.

#### ACADEMIC APPOINTMENTS

- Instructor, Cardiovascular Institute

#### HONORS AND AWARDS

- NIH K99/R00 Pathway to Independence Award, National Heart, Lung, and Blood Institute (NHLBI) (2023 - 2028)
- TRDRP Postdoctoral Fellowship, Tobacco-Related Disease Research Program (TRDRP), University of California, Office of the President (2020 - 2022)
- JSPS Overseas Research Fellowship, Japan Society for the Promotion of Science (JSPS) (2018 - 2020)
- Astellas Overseas Research Fellowship, Astellas Foundation for Research on Metabolic Disorders (2017 - 2018)

#### PROFESSIONAL EDUCATION

- PhD, Kyoto University , Cardiovascular Medicine (2017)
- Cardiology Fellowship, Tenri Hospital (Nara, Japan) , Cardiology (2012)
- Residency, Tenri Hospital (Nara, Japan) , Internal Medicine (2009)
- MD, Kyoto University , Medicine (2007)

#### LINKS

- Joseph Wu lab: <http://med.stanford.edu/wulab.html>
- Stanford Cardiovascular Institute: <https://med.stanford.edu/cvi.html>

### Publications

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#### PUBLICATIONS

- **Cryo-electron tomography reveals the structural diversity of cardiac proteins in their cellular context.** *bioRxiv : the preprint server for biology*

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- **Adverse Impact of Cannabis on Human Health.** *Annual review of medicine*  
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2023
  - **Cannabinoid receptor 1 antagonist genistein attenuates marijuana-induced vascular inflammation.** *Cell*  
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2022; 130 (7): 978-980
  - **The use of new CRISPR tools in cardiovascular research and medicine.** *Nature reviews. Cardiology*  
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2022
  - **Deciphering pathogenicity of variants of uncertain significance with CRISPR-edited iPSCs.** *Trends in genetics : TIG*  
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  - **Macrophages: Potential Therapeutic Target of Myocardial Injury in COVID-19.** *Circulation research*  
Nishiga, M., Wu, J. C.  
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  - **CRISPRi/a Screening with Human iPSCs.** *Methods in molecular biology (Clifton, N.J.)*  
Nishiga, M., Qi, L. S., Wu, J. C.  
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  - **Lionheart LincRNA alleviates cardiac systolic dysfunction under pressure overload.** *Communications biology*  
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2020; 3 (1): 434
  - **COVID-19 and cardiovascular disease: from basic mechanisms to clinical perspectives.** *Nature reviews. Cardiology*  
Nishiga, M. n., Wang, D. W., Han, Y. n., Lewis, D. B., Wu, J. C.  
2020
  - **Therapeutic genome editing in cardiovascular diseases.** *Advanced drug delivery reviews*  
Nishiga, M. n., Qi, L. S., Wu, J. C.  
2020
  - **Utility of collagen-derived peptides as markers of organ injury in patients with acute heart failure.** *Open heart*  
Nagao, K. n., Tamura, A. n., Sato, Y. n., Hata, R. n., Kawase, Y. n., Kadota, K. n., Horie, T. n., Sowa, N. n., Nishiga, M. n., Ono, K. n., Inada, T. n., Tanaka, M. n.  
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  - **Cardioprotective Effects of VCPModulator KUS121 in Murine and Porcine Models of Myocardial Infarction.** *JACC. Basic to translational science*  
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  - **Identification of Differential Roles of MicroRNA-33a and -33b During Atherosclerosis Progression With Genetically Modified Mice.** *Journal of the American Heart Association*  
Koyama, S., Horie, T., Nishino, T., Baba, O., Sowa, N., Miyasaka, Y., Kuwabara, Y., Nakao, T., Nishiga, M., Nishi, H., Nakashima, Y., Nakazeki, F., Ide, et al

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- **MiR-33a is a therapeutic target in SPG4-related hereditary spastic paraplegia human neurons.** *Clinical science (London, England : 1979)*  
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- **Circulating markers of collagen types I, III, and IV in patients with dilated cardiomyopathy: relationships with myocardial collagen expression.** *ESC heart failure*  
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- **SREBF1/MicroRNA-33b Axis Exhibits Potent Effect on Unstable Atherosclerotic Plaque Formation In Vivo** *ARTERIOSCLEROSIS THROMBOSIS AND VASCULAR BIOLOGY*  
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- **Dynamic changes of serum microRNA-122-5p through therapeutic courses indicates amelioration of acute liver injury accompanied by acute cardiac decompensation.** *ESC heart failure*  
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- **MicroRNA-33 Controls Adaptive Fibrotic Response in the Remodeling Heart by Preserving Lipid Raft Cholesterol** *CIRCULATION RESEARCH*  
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  - **Acute myocardial infarction and 30-year coronary aneurysm follow-up by serial angiography in a young adult with Kawasaki disease.** *Cardiovascular intervention and therapeutics*  
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  - **MicroRNA-451 Exacerbates Lipotoxicity in Cardiac Myocytes and High-Fat Diet-Induced Cardiac Hypertrophy in Mice Through Suppression of the LKB1/AMPK Pathway** *CIRCULATION RESEARCH*  
Kuwabara, Y., Horie, T., Baba, O., Watanabe, S., Nishiga, M., Usami, S., Izuhara, M., Nakao, T., Nishino, T., Otsu, K., Kita, T., Kimura, T., Ono, et al  
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  - **Cardiac tamponade during transesophageal echocardiography in a patient with infective endocarditis.** *Journal of echocardiography*  
Miyake, M., Izumi, C., Kuwano, K., Honjo, G., Matsutani, H., Hashiwada, S., Takahashi, S., Nishiga, M., Nakajima, S., Yamao, K., Hanazawa, K., Sakamoto, J., Yoshitani, et al  
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