

ISA Fellowship: Hiroki Kitakata

1) Biography:

Dr. Hiroki Kitakata, a graduate of Keio University School of Medicine, specializes in cardiovascular medicine with a research focus on heart failure and cardiomyopathy. Since 2017, he has pursued both basic and clinical research, motivated by his experiences with patients suffering from severe heart diseases. His exceptional work led to an early Ph.D. completion at Keio University. Now a postdoctoral scholar at Stanford University, Dr. Kitakata is dedicated to unraveling the mechanisms of cardiac amyloidosis and developing new therapies, integrating molecular insights with his clinical expertise.

2) Publication:

During the time of my fellowship: Not yet

Before the application of this fellowship:

<1st Author>

- **Kitakata H**, Kohno T, Kohsaka S, Fujisawa D, Nakano N, Sekine O, Shiraishi Y, Kishino Y, Katsumata Y, Yuasa S, Fukuda K. Social Isolation and Implementation of Advanced Care Planning Among Hospitalized Patients With Heart Failure.

J Am Heart Assoc. 2022 Nov;11(21):e026645.

- **Kitakata H**, Endo J, Ikura H, Moriyama H, Shirakawa K, Katsumata Y, Sano M.

Therapeutic Targets for Dox-Induced Cardiomyopathy: Role of Apoptosis vs. Ferroptosis.

Int J Mol Sci. 2022 Jan 26;23:1414. doi: 10.3390/ijms23031414.

- **Kitakata H**, Kohno T, Kohsaka S, Fujisawa D, Nakano N, Shiraishi Y, Katsumata Y, Nagatomo Y, Yuasa S, Fukuda K. Preferences on advance care planning and end-of-life care in patients hospitalized for heart failure.

ESC Heart Fail. 2021 Dec; 8;5102-5111. doi: 10.1002/ehf2.13578.

- **Kitakata H**, Endo J, Matsushima H, Yamamoto S, Ikura H, Hirai A, Koh S, Ichihara G, Hiraide T, Moriyama H, Shirakawa K, Goto S, Katsumata Y, Anzai A, Kataoka M, Tokuyama T, Ishido S, Yanagi S, Fukuda K, Sano M. MITOL/MARCH5 determines the susceptibility of cardiomyocytes to doxorubicin-induced ferroptosis by regulating GSH homeostasis.

J Mol Cell Cardiol. 2021 Aug 12;161:116-129.

- **Kitakata H**, Endo J, Hashimoto S, Mizuno E, Moriyama H, Shirakawa K, Goto S, Katsumata Y, Fukuda K, Sano M. Imeglimin prevents heart failure with preserved ejection fraction by recovering the

impaired unfolded protein response in mice subjected to cardiometabolic stress. *Biochem Biophys Res Commun.* 2021 Oct 1;572:185-190.

- **Kitakata H**, Kohsaka S, Kuroda S, Nomura A, Kitai T, Yonetsu T, Torii S, Matsue Y, Matsumoto S. Inflammatory and Hypercoagulable Biomarkers and Clinical Outcomes in COVID-19 Patients. *J Clin Med.* 2021 Jul 13;10(14):3086.
- **Kitakata H**, Katsumata Y, Kohsaka S, Sekine O, Kohno T, Sano M, Fukuda K. Patient Perspectives in the Era of Remote Medical Visits During the Coronavirus Disease (COVID-19) Pandemic - Insights From Outpatient Care of Cardiovascular Disease. *Circ Rep.* 2021 Apr 28;3(5):300-303.
- **Kitakata H**, Kohno T, Kohsaka S, Fujisawa D, Nakano N, Shiraishi Y, Katsumata Y, Yuasa S, Fukuda K. Prognostic Understanding and Preference for the Communication Process with Physicians in Hospitalized Heart Failure Patients. *J Card Fail.* 2021 Mar;27(3):318-326.
- **Kitakata H**, Itabashi Y, Kanazawa H, Miura K, Kimura M, Shinada K, de Jongh MC, Endo J, Tsuruta H, Murata M, Kawamura A, Murata M, Fukuda K. Appropriate device selection for transcatheter atrial septal defect closure using three-dimensional transesophageal echocardiography. *Int J Cardiovasc Imaging.* 2021 Apr;37(4):1159-1168.
- **Kitakata H**, Kohno T, Kohsaka S, Shiraishi Y, Parizo JT, Niimi N, Goda A, Nishihata Y, Heidenreich PA, Yoshikawa T. Prognostic Implications of Early and Midrange Readmissions After Acute Heart Failure Hospitalizations: A Report From a Japanese Multicenter Registry. *J Am Heart Assoc.* 2020 May 18;9(10):e014949.
- **Kitakata H**, Kohno T, Fukuda K. Sleep-disordered breathing in the elderly: is it distinct from that in the younger or middle-aged populations? *J Thorac Dis.* 2018 Apr;10(Suppl 9):S1102-S1107.
- **Kitakata H**, Kohno T, Kohsaka S, Fujino J, Nakano N, Fukuoka R, Yuasa S, Maekawa Y, Fukuda K. Patient confidence regarding secondary lifestyle modification and knowledge of 'heart attack' symptoms following percutaneous revascularisation in Japan: a cross-sectional study. *BMJ Open.* 2018 Mar 16;8(3):e019119.

<Co-author>

- Ichihara G, Katsumata Y, Sugiura Y, Matsuoka Y, Maeda R, Endo J, Anzai A, Shirakawa K, Moriyama H, Kitakata H, Hiraide T, Goto S, Ko S, Iwasawa Y, Sugai K, Daigo K, Goto S, Sato K, Yamada KI, Suematsu M, Ieda M, Sano M. MRP1-Dependent Extracellular Release of Glutathione Induces Cardiomyocyte Ferroptosis After Ischemia-Reperfusion. *Circ Res.* 2023 Oct; 133(10):861-876.
- Ikura H, Kitakata H, Endo J. A Reliable Baton Passing From Orthopedic Surgeon to Cardiologist - Cardiac Screening in Patients With Carpal Tunnel Syndrome for Early Diagnosis of Transthyretin Amyloid Cardiomyopathy. *Circ J.* 2023 Jul;87(8):1056-1057.
- Sekine O, Kitakata H, Kohsaka S, Fujisawa D, Nakano N, Shiraishi Y, Kishino Y, Katsumata Y, Yuasa S, Fukuda K, Kohno T. Perspectives of hospitalized heart failure patients: preferred and perceived participation roles in treatment decisions. *Heart Vessels.* 2023 Oct;38(10):1244-1255.
- Hashimoto S, Kitakata H, Kohsaka S, Fujisawa D, Shiraishi Y, Nakano N, Sekine O, Kishino Y, Katsumata Y, Yuasa S, Fukuda K, Kohno T. Confidence in self-care after heart failure hospitalization. *J Cardiol.* 2023 Jan; 81(1):42-48.
- Shirakawa K, Kobayashi E, Ichihara G, Kitakata H, Katsumata Y, Sugai K, Hakamata Y, Sano M. H2 Inhibits the Formation of Neutrophil Extracellular Traps. *JACC Basic Transl Sci.* 2022 Jan 12;7(2):146-161.
- Moriyama H, Kitakata H, Endo J, Ikura H, Fukuda K. Early Diagnosis of Amyloid Cardiomyopathy: Potential and Need Before the Onset of Decompensated Heart Failure. *JACC CardioOncol.* 2021 Jun 15;3(2):338.
- Goto S, Ichihara G, Katsumata Y, Ko S, Anzai A, Shirakawa K, Endo J, Kataoka M, Moriyama H, Hiraide T, Kitakata H, Kobayashi T, Fukuda K, Sano M. Time-Series Transcriptome Analysis Reveals the miR-27a-5p-Ppm1l Axis as a New Pathway Regulating Macrophage Alternative Polarization After Myocardial Infarction. *Circ J.* 2021 May 25;85(6):929-938.
- Horie H, Kohno T, Kohsaka S, Kitakata H, Shiraishi Y, Katsumata Y, Hayashida K, Yuasa S, Takatsuki S, Fukuda K. Frequent nightmares and its associations with psychological and sleep disturbances in hospitalized patients with cardiovascular diseases. *Eur J Cardiovasc Nurs.* 2021 Jun 29;20(5):421-427.

- Shirakawa K, Endo J, Kataoka M, Katsumata Y, Anzai A, Moriyama H, Kitakata H, Hiraide T, Ko S, Goto S, Ichihara G, Fukuda K, Minamino T, Sano M. MerTK Expression and ERK Activation Are Essential for the Functional Maturation of Osteopontin-Producing Reparative Macrophages After Myocardial Infarction.

J Am Heart Assoc. 2020 Sep 15;9(18):e017071.

- Yamashita K, Ito K, Endo J, Matsuhashi T, Katsumata Y, Yamamoto T, Shirakawa K, Isobe S, Kataoka M, Yoshida N, Goto S, Moriyama H, Kitakata H, Mitani F, Fukuda K, Goda N, Ichihara A, Sano M. Adrenal cortex hypoxia modulates aldosterone production in heart failure.

Biochem Biophys Res Commun. 2020 Mar 26;524(1):184-189.

- Hiraide T, Kataoka M, Suzuki H, Aimi Y, Chiba T, Isobe S, Katsumata Y, Goto S, Kanekura K, Yamada Y, Moriyama H, Kitakata H, Endo J, Yuasa S, Arai Y, Hirose N, Satoh T, Hakamata Y, Sano M, Gamou S, Kosaki K, Fukuda K. Poor outcomes in carriers of the RNF213 variant (p.Arg4810Lys) with pulmonary arterial hypertension.

J Heart Lung Transplant. 2020 Feb;39(2):103-112.

- Yoshida N, Endo J, Kinouchi K, Kitakata H, Moriyama H, Kataoka M, Yamamoto T, Shirakawa K, Morimoto S, Nishiyama A, Hashiguchi A, Higuchi I, Fukuda K, Ichihara A, Sano M. (Pro)renin receptor accelerates development of sarcopenia via activation of Wnt/YAP signaling axis.

Aging Cell. 2019 Oct;18(5):e12991.

- Shirakawa K, Endo J, Kataoka M, Katsumata Y, Yoshida N, Yamamoto T, Isobe S, Moriyama H, Goto S, Kitakata H, Hiraide T, Fukuda K, Sano M. IL (Interleukin)-10-STAT3-Galectin-3 Axis Is Essential for Osteopontin-Producing Reparative Macrophage Polarization After Myocardial Infarction.

Circulation. 2018 Oct 30;138(18):2021-2035.

- Yanagisawa R, Kataoka M, Kitakata H, Kohno T, Maekawa Y, Hayashida K, Fukuda K. Transcatheter Aortic Valve Implantation in a Patient with Severe, Precapillary Pulmonary Arterial Hypertension.

Ann Am Thorac Soc. 2017 Jan;14(1):147-149.

- Okabe T, Kitakata H, Iwahori H, Kurita Y, Ohashi N, Ogawa S. Vasospastic angina resulting in sudden cardiac arrest, initially misdiagnosed as a psychiatric disorder.

J Cardiol Cases. 2015 Mar 18;11(5):150-154.