

CURRICULUM VITAE

NAME

Ippei Shimizu M.D., Ph.D.

Associate Professor
Department of Cardiovascular Biology and Medicine,
Division of Molecular Aging and Cell Biology
Niigata University Graduate School of Medical and Dental Sciences



ADDRESS

1-757 Asahimachidori Chuoku Niigatashi, Niigata, Japan, Zipcode 951-8510
Phone: +81-25-227-2185 Fax: +81-25-227-0774
E-mail: ippeishimizu@yahoo.co.jp
ippeishimizu@med.niigata-u.ac.jp

PERSONAL INFORMATION

Date of birth: 26/4/1977
Gender: Male
Nationality: Japanese
Languages: Japanese and English

EDUCATION

2013(July~)-2014 Boston University School of Medicine, Research Instructor of Medicine
2012-2013(~June) Boston University School of Medicine, Whitaker Cardiovascular Institute,
Molecular Cardiology, postdoctoral fellow (Boston USA)
2010-2012 Chiba University Hospital Department of Cardiology, postdoctoral fellow
2006-2010 Doctoral coarse, Chiba university graduate school of medicine (Chiba, Japan)
1996-2002 Chiba University faculty of medicine (Chiba, Japan)

WORK EXPERIENCE

2014(April)-present Associate Professor, Department of Cardiovascular Biology and Medicine
Division of Molecular Aging and Cell Biology, Niigata University Graduate
School of Medical and Dental Sciences, Japan
2013-2014 Boston University School of Medicine, Research Instructor of Medicine
2012-2013 Boston University School of Medicine, Whitaker Cardiovascular Institute,
Molecular Cardiology, postdoctoral fellow
2010-2012 Chiba University Hospital Department of Cardiology, postdoctoral fellow
2004-2006 Sakakibara Heart Institute, Cardiovascular Internal Medicine, specialist trainee
2002-2004 National Center for Global Health and Medicine, foundation house officer

PUBLICATIONS

1. **Shimizu I**, Yoshida Y, Minamino T. *Hypertens Res* 2016 Feb 18, A role for circadian clock in metabolic disease.
2. Nakamura K, Sano S, Fuster J, Kikuchi R, **Shimizu I**, Ohshima K, Katanasaka Y, Ouchi N, and Walsh K. *J Biol Chem*. 2015 Feb 5;291(6):2566-75 Sfrp5 diminishes cardiac inflammation and protects the heart from ischemia-reperfusion injury.
3. **Shimizu I**, Yoshida Y, Minamino T. *Diabetes*. 2015 (Commentary) Dec;64(12):3984-6. Maintenance of subcutaneous fat homeostasis improves systemic metabolic dysfunction in obesity.
4. Nakagomi A, Okada S, Yokoyama M, Yoshida Y, **Shimizu I**, Miki T, Kobayashi Y, and Minamino T.

- Aging and Mechanism of Disease*. (Nature publishing group) 2015 October, Role of the central nervous system and adipose tissue BDNF/TrkB axes in metabolic regulation.
5. Yoshida Y*, **Shimizu I***, Minamino T. *Inflammation and regeneration*. 2015 September, The pathological role of adipose tissue aging in the progression of systemic insulin resistance. ***Co-first author**
 6. Yoshida Y*, **Shimizu I***, Katsuomi G*, Suda M, Hayashi Y, Minamino T. *J Mol Cell Cardiol*. 2015 June 85:183-198. p53-induced inflammation exacerbates cardiac dysfunction during pressure overload. ***Co-first author**
 7. **Shimizu I***, Yoshida Y, Minamino T*. *Int Heart J*. 2015 May 13;56(3):255-9. Pathological role of adipose tissue dysfunction in cardio-metabolic disorders. ***Co-corresponding author**
 8. **Shimizu I***, Walsh K. *Curr Obes Rep*. 2015 June 4;(2):224-229. Whitening of brown fat and implications for weight management in obesity. ***Corresponding author**
 9. **Shimizu I**, Yoshida Y, Suda M, Minamino T. *Cell Metab*. 2014 Dec 2;20(6):967-977. DNA damage response and metabolic disease.
 10. Suzuki H, Kayama Y, Sakamoto M, Iuchi H, **Shimizu I**, Yoshino T, Katoh D, Nagoshi T, Tojo K, Minamino T, Yoshimura M, Utsunomiya K. *Diabetes*. 2015 Feb;64(2):618-30. Arachidonate 12/15-lipoxygenase-induced inflammation and oxidative stress are involved in the development of Diabetic Cardiomyopathy
 11. Kikuchi R, Nakamura K, Maclachlan S, Ngo D, **Shimizu I**, Fuster J, Katanasaka Y, Yoshida S, Qiu Y, Yamaguchi T, Matsushita T, Murohara T, Gokce N, Bates D, Hamburg N, Walsh K. *Nat Med*. 2014 Dec;20(12):1464-71. An anti-angiogenic isoform of VEGF-A contributes to impaired vascularization in peripheral artery disease.
 12. Yoshida Y, Hayashi Y, Suda M, Tateno K, Okada S, Moriya J, Yokoyama M, Nojima A, Yamashita M, Kobayashi Y, **Shimizu I**, Minamino T. *PLoS One*. 2014 Jun 20;9(6). Notch Signaling Regulates the Lifespan of Vascular Endothelial Cells via a p16-Dependent Pathway.
 13. Yokoyama M, Okada S, Nakagomi A, Moriya J, **Shimizu I**, Nojima A, Yoshida Y, Ichimiya H, Kamimura N, Kobayashi Y, Ohta S, Fruttiger M, Lozano G, Minamino T. *Cell Rep*. 2014 Jun 12;7(5):1691-703. Inhibition of endothelial p53 improves metabolic abnormalities related to dietary obesity.
 14. **Shimizu I**, Tamar A, Kikuchi R, Shimizu A, Papanicolaou K, Maclachlan S, Maruyama S, Walsh K. *J Clin Invest*. 2014; May;124(5):2099-112. Vascular rarefaction mediates whitening of brown fat in obesity.
 15. **Shimizu I**, Yoshida Y, Moriya J, Nojima A, Uemura A, Kobayashi Y, Minamino T. *Cell Metab*. 2013 Oct 1;18(4):491-504. Semaphorin3E-induced inflammation contributes to insulin resistance in dietary obesity. (Featured article)
 16. Nojima A, Yamashita M, Yoshida Y, **Shimizu I**, Ichimiya H, Kamimura N, Kobayashi Y, Ohta S, Ishii Naoaki, Minamino T. *PLoS One*. 2013 Jul; 30;8(7). Haploinsufficiency of Akt1 prolongs the lifespan of mice.
 17. **Shimizu I**, Walsh K. *J Mol Cell Cardiol*. 2013 Jun;59:176-8. Vascular remodeling mediated by Angptl2 produced from perivascular adipose tissue.
 18. **Shimizu I**, Yoshida Y, Katsuno T, Minamino T. *Microbes and Infection*. 2013; 1:11-7. Adipose tissue inflammation in diabetes and heart failure.
 19. Tomita K, Teratani T, Suzuki T, Oshikawa T, Yokoyama H, Shimamura K, Nishiyama K, Mataka N, Irie R, Minamino T, Okada Y, Kurihara C, Ebinuma H, Saito H, **Shimizu I**, Yoshida Y, Hokari R, Sugiyama K, Hatsuse K, Yamamoto J, Kanai T, Miura S, Hibi T. *J Hepatol*. 2012; 57, 837-843. P53/p66Shc-mediated signaling contributes to the progression of non-alcoholic steatohepatitis in humans and mice.
 20. Naito AT, Sumida T, Nomura S, Liu ML, Higo T, Nakagawa A, Okada K, Sakai T, Hashimoto A, Hara Y, **Shimizu I**, Zhu W, Toko H, Katada A, Akazawa H, Oka T, Lee JK, Minamino T, Nagai T, Walsh K, Kikuchi A, Matsumoto M, Botto M, Shiojima I, Komuro I. *Cell*. 2012; 149: 1298-313. Complement C1q Activates Canonical Wnt Signaling and Promotes Aging-Related Phenotypes.
 21. Okada S, Yokoyama M, Toko H, Tateno K, Moriya J, **Shimizu I**, Nojima A, Ito T, Yoshida Y, Kobayashi Y, Katagiri H, Minamino T, Komuro I. *Arterioscler Thromb Vasc Biol*. 2012; 8: 1902-9. Brain-derived neurotrophic factor protects against cardiac dysfunction after myocardial infarction via a central nervous system-mediated pathway.
 22. **Shimizu I**, Yoshida Y, Katsuno T, Tateno K, Okada S, Moriya J, Yokoyama M, Nojima A, Ito T,

Zechner R, Komuro I, Kobayashi Y, Minamino T. *Cell Metab.* 2012; 15:51-64. p53-induced adipose tissue inflammation is critically involved in the development of insulin resistance in heart failure. (Featured article)

23. Yasuda N, Akazawa H, Ito K, **Shimizu I**, Kudo-Sakamoto Y, Yabumoto C, Yano M, Yamamoto R, Ozasa Y, Minamino T, Naito AT, Oka T, Shiojima I, Tamura K, Umemura S, Nemer M, Komuro I. *Hypertension.* 2012; 59: 627-33. Agonist-independent constitutive activity of angiotensin II receptor promotes cardiac remodeling in mice.
24. **Shimizu I**, Minamino T, Toko H, Okada S, Ikeda H, Yasuda N, Tateno K, Moriya J, Yokoyama M, Nojima A, Koh G, Akazawa H, Shiojima I, Kahn C, Abel E, & Komuro I. *J Clin Invest.* 2010;120:1506-1514. Excessive cardiac insulin signaling exacerbates systolic dysfunction induced by pressure overload in rodents.
25. Moriya J, Minamino T, Tateno K, Okada S, Akiyoshi U. **Shimizu I**, Yokoyama M, Nojima A, Henderson CE, Okada M, Koga H, Komuro I. *Circ Res.* 2010; 106:391-8. Inhibition of Semaphorin A as a Novel Strategy for Therapeutic Angiogenesis.
26. Minamino T*, Orimo M*, **Shimizu I***, Kunieda T, Yokoyama M, Ito T, Nojima A, Nabetani A, Oike Y, Matsubara H, Ishikawa F, Komuro I. *Nat Med.* 2009; 15:1082-7. A crucial role for adipose tissue p53 in the regulation of insulin resistance. ***Co-first author**
27. Kayama Y, Minamino T, Toko H, Sakamoto M, **Shimizu I**, Takahashi H, Okada S, Tateno K, Moriya J, Yokoyama M, Nojima A, Yoshimura M, Egashira K, Aburatani H and Komuro I. *J. Exp. Med.* 2009; 206:1565-74. Cardiac 12/15-lipoxygenase-induced inflammation is involved in heart failure.
28. **Shimizu I**, Iguchi N, Watanabe H, Umemura J, Tobaru T, Asano R, Misu K, Nagayama M, Aikawa M, Funabashi N, Komuro I, Sumiyoshi T. *Int J Cardiol.* 2010; 142:224-9. Delayed enhancement cardiovascular magnetic resonance as a novel technique to predict cardiac events in dilated cardiomyopathy patients.
29. Sano M, Minamino T, Toko H, Miyauchi H, Orimo M, Qin Y, Akazawa H, Tateno K, Kayama Y, Harada M, **Shimizu I**, Asahara T, Hamada H, Tomita S, Molkentin JD, Zou Y, Komuro I. *Nature.* 2007; 446:444-8. p53-induced inhibition of Hif-1 causes cardiac dysfunction during pressure overload.

INVITED LECTURES AND PRESENTATIONS -International-

1. **Shimizu I**, Seminar, 2016, February 11, Rigshospitalet(Copenhagen University Hospital), Copenhagen, Denmark. Aging signaling promotes pathologies in cardio-metabolic disorders.
2. **Shimizu I**, Symposium, Annual Summer Symposium of the Basic Science study group, branch of the Korean Society of Cardiology, 2015, August 21-22, Osong, Korea. The pathological role of aging signaling in cardio-metabolic disorders.
3. **Shimizu I**, Symposium, 28th Spring Congress of Korean Diabetes Association, 2015, May7-9, Gwangju, Korea. The pathological role of aging signaling in heart failure.
4. **Shimizu I**, Invited lecture, Inje University, 2015, May6, Busan, Korea. The pathological role of adipose tissue dysfunction in cardio-metabolic disorders.
5. **Shimizu I**, Walsh K, Minamino T. The 58th Annual Scientific Meeting of The Korean Society of Cardiology, 2014, Nov28, Goyang, Korea. Capillary rarefaction mediates whitening of brown fat and contributes to insulin resistance in obesity.
6. **Shimizu I**, Symposium, American Diabetes Association 73rd Scientific Sessions, Chicago, June21, 2013, Insulin resistance and cardiovascular diseases- A common pathophysiologic link through inflammation?
7. **Shimizu I**, Program Project Grant meeting, Boston University School of Medicine, June12, 2013, Capillary rarefaction mediates whitening of brown fat and contributes to insulin resistance in dietary obesity.

INTERNATIONAL MEETINGS

Fourteen meetings.

INVITED PRESENTATIONS -Japan-

Thirty-four meetings.

PRESENTATIONS -Japan-

Thirty-five meetings.

QUALIFICATIONS

1. Board Certified Member of the Japanese Society of Internal Medicine, 2005
2. Cardiovascular Specialist of Japanese Circulation Society, 2009
3. Doctor of Philosophy, 2010

ACADEMIC HONORS

- 2014 First Place, Young Investigator Competition of the 58th Annual Scientific Meeting. The Korean Society of Cardiology. Nov 28, 2014, Republic of Korea.
- 2014 **President's Award, Niigata University**, Japan
- 2013 Best of the Day, Poster Award, XXI ISHR World Congress, 2013, July, USA
- 2013 Travel Award for the ISHR XXI World Congress, San Diego California, USA
- 2012 Winner, 2012 Melvin L. Marcus Young Investigator Award in Cardiovascular Sciences, American Heart Association Scientific Sessions 2012, Los Angeles, USA**
- 2012 Young Investigators Award, The 49th Annual Meeting of the Japanese Society of Molecular Medicine, Kyoto, Japan
- 2011 Outstanding Best Presenter Award, 12th US-Japan-Asia Dialogue on Cardiovascular Disease and Young Investigator Competition, Tokyo, Japan
- 2011 Chiba Medical Society Young Investigator Award, Japan
- 2011 Exceptional Poster Award, Miyazaki Science Camp, Japan
- 2011 Award for Excellence, 4th Frontier of Cardiovascular Disease and Metabolic Syndrome Research, Japan
- 2010 Young Investigators Award, The 27th Annual Scientific Session of the International Society for Heart Research, Japanese Division, Kyoto, Japan
- 2010 Young investigators Award, The 14th Annual Scientific Session of the Society of Cardiovascular Endocrinology and Metabolism, Nara, Japan
- 2010 **Dean's Award, Chiba University** Graduate School of Medicine and Pharmaceutical Sciences, Japan
- 2010 **President's Award, Chiba University**, Japan
- 2009 Outstanding achievement award (Prof. Issei Komuro) , Japan
- 2009 Young Investigator Award (highest award), 2nd Cardiovascular Aging and Metabolic Syndrome Symposium on the Pathophysiology of Cancer, Japan

GRANTS AWARDED

- 2016 Inamori Foundation, Research Representative
- 2015 SENSHIN Medical Research Foundation, Research Representative
- 2015 Kanae Foundation Research Grant, Research Representative
- 2015 Grant for Basic Science Research Projects from The Sumitomo Foundation, Research Representative
- 2015 Banyu Foundation Research Grant, Research Representative
- 2015 Tsukada Grant for Niigata University Medical Research, Research Representative
- 2014 Japan Heart Foundation Research Grant, Research Representative
- 2014 The Uehara Memorial Foundation, Research Representative
- 2014 ONO Medical Research Foundation, Research Representative
- 2014 The Senri Life Science Foundation, Research Representative
- 2014 The Nakajima Foundation, Research Representative
- 2014 SENSHIN Medical Research Foundation, Research Representative
- 2014 Kowa Life Science Foundation, Research Representative
- 2014 SUZUKEN memorial foundation, Research Representative
- 2014 HOKUTO Corporation, Research Representative
- 2014 Grants-in-Aid for Young Scientists (Start-up) (KAKENHI) 26893080, Research Representative
- 2014 Mochida Memorial Foundation for Medical & Pharmaceutical Research, Research Representative
- 2013 Aging and geriatrics Novartis research foundation, exchanges overseas research grant, Research Representative

2012 Manpei Suzuki Diabetes foundation, Research Representative
2012 Kanae Foundation for the Promotion of Medical Science, Research Representative
2011 Japan Heart Foundation/Novartis Research Award on Molecular and Cellular Cardiology,
Research Representative
2011 Kowa Life Science Foundation, Research Representative
2011 The Uehara Memorial Foundation, Research Representative
2011 Japan Society for the promotion of science, Grant-in-Aid for Young Scientists (B), Research
Representative
2011 Takeda Science Foundation, Research Representative
2010 Novartis research foundation, Research Representative

SOCIETIES

1. American Heart Association
2. European Society of Cardiology, Working Group on Cellular Biology of the Heart
3. Heart Failure Association of the ESC
4. Japanese Circulation Society
5. The Japanese Society of Internal Medicine
6. International Society for Heart Research Japanese Section
7. Society of Cardiovascular Endocrinology and Metabolism
8. Japanese Society of Molecular Medicine
9. The Japan Geriatrics Society
10. The Japanese Society of Hypertension
11. The Japanese Heart Failure Society
12. Japan Society of the Study of Obesity
13. Japanese Society for Circulation Research
14. The Molecular Biology Society of Japan
15. Japanese Society of Anti-Aging Medicine