

CURRICULUM VITAE ~ Hisashi Sawada

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Date Prepared: 10/29/2021

CURRICULUM VITAE

Hisashi Sawada, M.D., Ph.D.
Assistant Professor
Saha Cardiovascular Research Center
University of Kentucky College of Medicine



I. GENERAL INFORMATION

Office Address 741 S Limestone St
Biomedical/Biological Sciences Research Building
Rm: B251
Lexington, KY 40536-0509

Email hisashi.sawada@uky.edu
Telephone 859-218-1705

Professional Licensure
03/2008 **Japanese Medical License Registration**
#470194

Board Certification
04/2011 **Board Certified Member of the Japanese Society of Internal Medicine**
#47188

II. EDUCATION

Undergraduate
04/2002 - 03/2008 **Hyogo College of Medicine**
Nishinomiya, Hyogo, Japan
MD

Professional/Graduate

04/2010 - 09/2015 **Graduate School of Medicine, Hyogo College of Medicine**
Nishinomiya, Hyogo, Japan
PhD

Post-Graduate

10/2015 – 10/2020 **Saha Cardiovascular Research Center, University of Kentucky**
Lexington, KY
Post-doctoral researcher

III. PROFESSIONAL EXPERIENCES

04/2008 - 03/2010 **Postgraduate Clinical Training Center, Hyogo College of Medicine**
College Hospital
Nishinomiya, Hyogo, Japan
Resident, full-time

04/2010 - 03/2011 **Cardiovascular Division, Department of Internal Medicine, Hyogo**
College of Medicine
Nishinomiya, Hyogo, Japan
Fellow, full-time

04/2010 - 03/2011 **Cardiovascular Division, Department of Internal Medicine, Hyogo**
College of Medicine
Nishinomiya, Hyogo, Japan
Staff cardiologist, full-time

04/2011 - 09/2015 **Cardiovascular Division, Department of Internal Medicine, Hyogo**
College of Medicine
Nishinomiya, Hyogo, Japan
Assistant professor, full-time

IV. ACADEMIC APPOINTMENTS

Faculty

04/2011 - 09/2015 **Cardiovascular Division, Department of Internal Medicine, Hyogo**
College of Medicine
Nishinomiya, Hyogo, Japan
Assistant professor, tenure, full-time

11/2020 - Present **Department of Physiology, University of Kentucky**
Lexington, KY
Research assistant professor, non-tenure-track, full-time

V. HOSPITAL or CLINICAL APPOINTMENTS

04/2008 - 03/2010	Postgraduate Clinical Training Center, Hyogo College of Medicine College Hospital Nishinomiya, Hyogo, Japan Resident, full-time
04/2010 - 03/2011	Cardiovascular Division, Department of Internal Medicine, Hyogo College of Medicine Nishinomiya, Hyogo, Japan Fellow, full-time
04/2011 - 10/2013	Cardiovascular Division, Department of Internal Medicine, Hyogo College of Medicine Nishinomiya, Hyogo, Japan Staff cardiologist, full-time
10/2013 - 09/2015	Cardiovascular Division, Department of Internal Medicine, Hyogo College of Medicine Nishinomiya, Hyogo, Japan Assistant professor, full-time

VI. TEACHING ACTIVITIES

University Faculty

04/2013 - 09/2015	Hyogo College of Medicine Nishinomiya, Hyogo, Japan Lectures, electrocardiography and arrhythmia, course for medical students
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VII. ADVISING ACTIVITIES

Student Advising

05/2016 - 09/2018	University of Kentucky, Saha Cardiovascular Research Center Lexington, KY Bradley C. Wright, pre-doctoral student, Dr. Daugherty's lab, Saha Cardiovascular Research Center Mentor: supervision on lab technique, experimental design, data analysis
01/2020 - 06/2020	Preet Patel, high school student, Dr. Daugherty's lab, Saha Cardiovascular Research Center Mentor: supervision on data analysis

VIII. HONORS & AWARDS

06/2013	Poster Award, The 61st Annual Scientific Session of the Japanese College of Cardiology, Kumamoto, Japan
09/2014	Encouraging Prize, The 9th Conference of Hypertension and Coronary Heart Diseases, Tokyo, Japan
05/2016	Young Investigator Travel Award, ATVB/PVD 2016 Scientific Sessions, Nashville, TN, USA
09/2016	Academic Award for Graduate School Student 2015, Hyogo College of Medicine, Hyogo, Japan
11/2016	Young Investigator Travel Award, AHA 2016 Scientific Sessions, New Orleans, LA, USA
08/2018	Second Place, The 10th Annual Postdoctoral Poster Session, Postdoctoral Advisory Committee, College of Medicine, University of Kentucky, KY, USA.
06/2021	Cover Art, June Issue, Arteriosclerosis, Thrombosis, and Vascular Biology
09/2021	Top Reviewer Award, Arteriosclerosis, Thrombosis, and Vascular Biology

IX. PROFESSIONAL ACTIVITIES, PUBLIC SERVICE & PROFESSIONAL DEVELOPMENT

Memberships

04/2010 - Present	Japanese Society of Echocardiography
04/2010 - Present	The Japan Collage of Cardiology
04/2010 - Present	The Japanese Circulation Society
04/2010 - Present	The Japanese Society of Internal Medicine
04/2012 - Present	Japanese Society of Hypertension
01/2016 - Present	American Heart Association

Journal Peer-Reviewing

01/2018 - Present	eLife
06/2018 - Present	Arteriosclerosis, Thrombosis, and Vascular Biology
02/2019 - Present	Journal of Clinical Investigation
05/2019 - Present	Circulation Journal
08/2019 - Present	Circulation
10/2019 - Present	PLoS ONE
08/2020 - Present	BMC Cardiovascular Disorders
08/2020 - Present	Science Translational Research
09/2020 - Present	Evolutionary Bioinformatics
10/2020 - Present	Cardiovascular Research
10/2020 - Present	Cardiovascular Drugs and Therapy
12/2020 - Present	Aorta
01/2021 - Present	Frontiers in Cardiovascular Medicine, Atherosclerosis and Vascular Medicine
08/2021 - Present	Journal of Pathology

X. SPEAKING ENGAGEMENTS

International

- 10/2021 **The 15th Qianjiang International Cardiovascular Conference**
Qianjiang, China (Web-based scientific session)
Cardiovascular Implication in Emerging Diseases, “Functional Heterogeneity of Smooth Muscle Cells in Aortopathies”
- 09/2020 **The 14th Qianjiang International Cardiovascular Conference**
Qianjiang, China (Web-based scientific session)
Cardiovascular Implication in Emerging Diseases, “Aortic heterogeneity as a determinant of aneurysm, rupture, and dissection”
- 10/2020 **The 61st Annual Meeting of Japanese College of Angiology**
Sendai, Japan (Web-based scientific session)
Special Lecture, “Embryonic Origin of Smooth Muscle Cells in Thoracic Aortopathy Formation”

Local

- 05/2018 **University of Kentucky, College of Medicine**
Lexington, KY
Dean’s Distinguished Lecture Series, “LRP1 Deletion in the Outer Aortic Media Promotes Angiotensin II-induced Thoracic Aortic Aneurysm”

XI. RESEARCH & INTELLECTUAL CONTRIBUTIONS

A. PUBLICATIONS

Peer-Reviewed Original Research in Professional, Scientific or Educational Journals

1. Azuma N, Hashimoto N, Yasumitsu A, Fukuoka K, Yokoyama K, **Sawada H**, Nishioka A, Sekiguchi M, Kitano M, Kuroiwa T, Matsui K, Sano H. CMV infection presenting as a cavitory lung lesion in a patient with systemic lupus erythematosus receiving immunosuppressive therapy. *Intern Med.* 2009; 48: 2145-9.
2. Azuma N, Kanda C, Nishioka A, Tanaka J, Mishiro Y, Takehara J, **Sawada H**, Kitano M, Okabe M, Morimoto M, Sekiguchi M, Kuroiwa T, Hashimoto N, Matsui K, Iwasaki T, Sano H. Case of refractory otitis media with high-titer positive serum MPO-ANCA value. *Nihon Rinsho Meneki Gakkai Kaishi.* 2010; 33: 99-104.
3. Naito Y, Hirotsu S, **Sawada H**, Akahori H, Tsujino T, Masuyama T. Dietary iron restriction prevents hypertensive cardiovascular remodeling in Dahl salt-sensitive rats. *Hypertension.* 2011; 57: 497-504.

4. Naito Y, Tsujino T, Fujimori Y, **Sawada H**, Akahori H, Hirotani S, Ohyanagi M, Masuyama T. Impaired expression of duodenal iron transporters in Dahl salt-sensitive heart failure rats. *J Hypertens*. 2011; 29: 741-8.
5. Fujii K, Kawasaki D, Oka K, Akahori H, Fukunaga M, **Sawada H**, Masutani M, Lee-Kawabata M, Tsujino T, Ohyanagi M, Masuyama T. Endothelium-dependent coronary vasomotor response and neointimal coverage of zotarolimus-eluting stents 3 months after implantation. *Heart*. 2011; 97: 977-82.
6. Fujii K, Kawasaki D, Oka K, Akahori H, Iwasaku T, Fukunaga M, Eguchi A, **Sawada H**, Masutani M, Lee-Kawabata M, Tsujino T, Ohyanagi M, Masuyama T. The impact of pravastatin pre-treatment on periprocedural microcirculatory damage in patients undergoing percutaneous coronary intervention. *JACC Cardiovasc Interv*. 2011; 4: 513-20.
7. **Sawada H**, Naito Y, Hirotani S, Akahori H, Iwasaku T, Eguchi A, Okuhara Y, Fujii A, Ohyanagi M, Mitsuno M, Miyamoto Y, Tsujino T, Masuyama T. Involvement of bone morphogenetic protein-binding endothelial regulator in aortic valve stenosis. *Int J Cardiol*. 2011; 152: 107-9.
8. Naito Y, Fujii A, **Sawada H**, Hirotani S, Iwasaku T, Eguchi A, Ohyanagi M, Tsujino T, Masuyama T. Effect of iron restriction on renal damage and mineralocorticoid receptor signaling in a rat model of chronic kidney disease. *J Hypertens*. 2012; 30: 2192-201.
9. **Sawada H**, Naito Y, Hirotani S, Akahori H, Iwasaku T, Okuhara Y, Miki K, Eguchi A, Mitsuno M, Miyamoto Y, Ohyanagi M, Tsujino T, Masuyama T. Expression of interleukin-33 and ST2 in nonrheumatic aortic valve stenosis. *Int J Cardiol*. 2013; 168: 529-31.
10. Naito Y, **Sawada H**, Oboshi M, Fujii A, Hirotani S, Iwasaku T, Okuhara Y, Eguchi A, Morisawa D, Ohyanagi M, Tsujino T, Masuyama T. Increased renal iron accumulation in hypertensive nephropathy of salt-loaded hypertensive rats. *PLoS One*. 2013; 8: e75906.
11. Naito Y, **Sawada H**, Hirotani S, Iwasaku T, Okuhara Y, Eguchi A, Miki K, Ohyanagi M, Tsujino T, Masuyama T. Angiotensin II type 1a receptor signaling is implicated in erythropoietin production in response to iron deficiency in mice. *Int J Cardiol*. 2013; 168: 1607-8.
12. Naito Y, Fujii A, **Sawada H**, Hirotani S, Iwasaku T, Okuhara Y, Eguchi A, Ohyanagi M, Tsujino T, Masuyama T. Dietary iron restriction prevents further deterioration of renal damage in a chronic kidney disease rat model. *J Hypertens*. 2013; 31: 1203-13.
13. Naito Y, Hosokawa M, Hao H, **Sawada H**, Hirotani S, Iwasaku T, Okuhara Y, Eguchi A, Hirota S, Ohyanagi M, Tsujino T, Masuyama T. Impact of dietary iron restriction on the development of monocrotaline-induced pulmonary vascular remodeling and right ventricular failure in rats. *Biochem Biophys Res Commun*. 2013; 436: 145-51.

14. Naito Y, Hosokawa M, **Sawada H**, Oboshi M, Iwasaku T, Okuhara Y, Morisawa D, Eguchi A, Hirotani S, Ohyanagi M, Tsujino T, Masuyama T. Hepsidin is increased in the hypertrophied heart of Dahl salt-sensitive rats. *Int J Cardiol.* 2014; 172: e45-7.
15. Fukunaga M, Fujii K, Kawasaki D, **Sawada H**, Miki K, Tamaru H, Imanaka T, Iwasaku T, Nakata T, Shibuya M, Akahori H, Masutani M, Kobayashi K, Ohyanagi M, Masuyama T. Thermodilution-derived coronary blood flow pattern immediately after coronary intervention as a predictor of microcirculatory damage and midterm clinical outcomes in patients with ST-segment-elevation myocardial infarction. *Circ Cardiovasc Interv.* 2014; 7: 149-55.
16. Akahori H, Tsujino T, Naito Y, **Sawada H**, Sugahara M, Fukui M, Ohyanagi M, Mitsuno M, Miyamoto Y, Masuyama T. Nuclear factor- κ B-hypoxia-inducible factor-2 pathway in aortic valve stenosis. *J Heart Valve Dis.* 2014; 23: 558-66.
17. Akahori H, Tsujino T, Naito Y, Matsumoto M, Sasaki N, Iwasaku T, Eguchi A, **Sawada H**, Hirotani S, Masuyama T. Atorvastatin ameliorates cardiac fibrosis and improves left ventricular diastolic function in hypertensive diastolic heart failure model rats. *J Hypertens.* 2014; 32: 1534-41.
18. Okuhara Y, Hirotani S, Naito Y, Nakabo A, Iwasaku T, Eguchi A, Morisawa D, Ando T, **Sawada H**, Manabe E, Masuyama T. Intravenous salt supplementation with low-dose furosemide for treatment of acute decompensated heart failure. *J Card Fail.* 2014; 20: 295-301.
19. **Sawada H**, Hao H, Naito Y, Oboshi M, Hirotani S, Mitsuno M, Miyamoto Y, Hirota S, Masuyama T. Aortic iron overload with oxidative stress and inflammation in human and murine abdominal aortic aneurysm. *Arterioscler Thromb Vasc Biol.* 2015; 35, 1507-14.
20. **Sawada H**, Naito Y, Oboshi M, Soyama Y, Nishimura K, Eguchi A, Ando T, Okuhara Y, Morisawa D, Iwasaku T, Hirotani S, Mano T, Mitsuno M, Miyamoto Y, Masuyama T. Increment of Pentraxin3 Expression in Abdominal Aortic Aneurysm. *Int J Cardiol.* 2015; 195: 281-2.
21. **Sawada H**, Naito Y, Oboshi M, Iwasaku T, Okuhara Y, Morisawa D, Eguchi A, Hirotani S, Masuyama T. Iron restriction inhibits renal injury in aldosterone/salt-induced hypertensive mice. *Hypertens Res.* 2015; 38, 317-22.
22. Naito Y, **Sawada H**, Oboshi M, Iwasaku T, Okuhara Y, Morisawa D, Eguchi A, Hirotani S, Mano T, Tsujino T, Masuyama T. Cardiac remodeling in response to chronic iron deficiency: role of the erythropoietin receptor. *J Hypertens.* 2015; 33, 1267-75.
23. Naito Y, Hosokawa M, **Sawada H**, Oboshi M, Hirotani S, Iwasaku T, Okuhara Y, Morisawa D, Eguchi A, Nishimura K, Soyama Y, Fujii K, Mano T, Ishihara M, Tsujino T, Masuyama T. Transferrin receptor 1 in Chronic Hypoxia-induced pulmonary vascular remodeling. *Am J Hypertens.* 2015; 29: 713-8.

24. Oboshi M, Naito Y, **Sawada H**, Hirotani S, Iwasaku T, Okuhara Y, Morisawa D, Eguchi A, Nishimura K, Fujii K, Mano T, Ishihara M, Masuyama T. Temporary dietary iron restriction affects the process of thrombus resolution in a rat model of deep vein thrombosis. *PLoS One*. 2015; 10: e0126611.
25. Naito Y, Fujii A, **Sawada H**, Oboshi M, Iwasaku T, Okuhara Y, Morisawa D, Eguchi A, Hirotani S, Masuyama T. Association between renal iron accumulation and renal interstitial fibrosis in a rat model of chronic kidney disease. *Hypertens Res*. 2015; 38: 463-70.
26. Fujii K, Hao H, Shibuya M, Imanaka T, Fukunaga M, Miki K, Tamaru H, **Sawada H**, Naito Y, Ohyanagi M, Hirota S, Masuyama T. Accuracy of OCT, grayscale IVUS, and their combination for the diagnosis of coronary TCFA: an sex vivo validation study. *JACC Cardiovasc Imaging*. 2015; 8: 451-60.
27. Oboshi M, Naito Y, **Sawada H**, Iwasaku T, Okuhara T, Eguchi A, Hirotani S, Mano T, Tsujino T, Masuyama T. Attenuation of hypertension and renal damage in renovascular hypertensive rats by iron restriction. *Hypertens Res*. 2016; 39: 832-9.
28. Naito Y, Hosokawa M, **Sawada H**, Oboshi M, Iwasaku T, Okuhara T, Eghchi A, Nishimura K, Soyama Y, Hirotani S, Mano T, Ishihara M, Masuyama T. Iron is associated with the development of hypoxia-induced pulmonary vascular remodeling in mice. *Heart Vessels*. 2016; 31: 2074-9.
29. Naito Y, Hosokawa M, **Sawada H**, Oboshi M, Hirotani S, Iwasaku T, Okuhara Y, Morisawa D, Eguchi A, Nishimura K, Soyama Y, Fujii K, Mano T, Ishihara M, Tsujino T, Masuyama T. Transferrin Receptor 1 in chronic hypoxia-induced pulmonary vascular remodeling. *Am J Hypertens*. 2016; 29: 713-8.
30. Oboshi M, Naito Y, **Sawada H**, Ando T, Iwasaku T, Okuhara Y, Eguchi A, Nishimura K, Soyama Y, Fujii K, Hirotani S, Mano T, Ishihara M, Masuyama T. Experience of dietary iron intake restriction in patients with essential hypertension. *Int J Cardiol*, 2016; 206: 154-6.
31. Morisawa d, Hirotani S, Oboshi M, Nishimura K, **Sawada H**, Eguchi A, Okuhara Y, Iwasaku T, Naito Y, Mano T, Okamura H, Masuyama T. Interleukin-18 disruption suppresses hypoxia-induced pulmonary artery hypertension in mice. *Int J Cardiol*. 2016; 202: 522-4.
32. Eguchi A, Naito Y, Iwasaku T, Okuhara Y, Morisawa D, **Sawada H**, Nishimura K, Oboshi M, Fujii K, Mano T, Masuyama T, Hirotani S. Association of dietary iron restriction with left ventricular remodeling after myocardial infarction in mice. *Heart Vessels*. 2016; 31: 222-9.
33. Shibuya M, Fujii K, Hao H, Imanaka T, Fukunaga M, Miki K, Tamaru H, Nakata T. **Sawada H**, Naito Y, Hirota S, Masuyama T. Ex vivo comparison of angiography and histopathology

- for the evaluation of coronary plaque characteristics. *Int J Cardiovasc Imaging*. 2016; 32: 863-9.
34. **Sawada H**, Rateri DL, Moorlegghen JJ, Majesky MW, Daugherty A. Smooth muscle cells derived from second heart field and cardiac neural crest reside in spatially distinct domains in the media of the ascending aorta. *Arterioscler Thromb Vasc Biol*. 2017; 37: 1722-6.
 35. Daugherty A, Chen Z, **Sawada H**, Rateri DL, Sheppard MB. TGF- β in thoracic aortic aneurysm: Good, Bad, or Irrelevant? *J Am Heart Assoc*. 2017; 6: e005221.
 36. Naito Y, **Sawada H**, Oboshi M, Okuno K, Yasumura S, Okuhara Y, Eguchi A, Nishimura K, Soyama Y, Asakura M, Ishihara M, Tsujino T, Masuyama T. Altered expression of intestinal duodenal cytochrome b and divalent metal transporter 1 might be associated with cardio-renal anemia syndrome. *Heart Vessels*. 2017; 32: 1410-4.
 37. Naito Y, Senchi A, **Sawada H**, Oboshi M, Horimatsu T, Okuno K, Yasumura S, Ishihara M, Masuyama T. Iron-restricted pair-feeding affects renal damage in rats with chronic kidney disease. *PLoS One*. 2017; 12: e0172157.
 38. **Sawada H**, Wright BC, Chen JZ, Lu HS, Daugherty A. Drebrin - a new player in angiotensin II-induced aortopathies. *Cardiovasc Res*. 2018; 114: 1699-701.
 39. **Sawada H**, Chen JZ, Wright BC, Sheppard MB, Lu HS, Daugherty A. Heterogeneity of aortic smooth muscle cells: a determinant for regional characteristics of thoracic aortic aneurysms? *J Transl Int Med*. 2018; 6: 93-96.
 40. Wu CH*, Mohammadmoradi S*, Chen JZ*, **Sawada H***, Daugherty A, Lu HS. Renin-angiotensin system and cardiovascular functions. *Arterioscler Thromb Vasc Biol*. 2018; 38: e108-16.
* = equally contributed
 41. Okuno K, Naito Y, Yasumura S, **Sawada H**, Oboshi M, Nishimura, K, Asakura M, Ishihara M, Masuyama T. Influence of dietary iron intake restriction on the development of hypertension in weanling prehypertensive rats. *Heart and Vessels*. 2018; 33: 820-5.
 42. **Sawada H**, Wright BC, Chen JZ, Moorlegghen JJ, Lu HS, Daugherty A. Ultrasonography of the thoracic and abdominal aorta in mice to determine aneurysm dimensions. *J Vis Exp*. 2019; 145: e59013.
 43. Chen JZ, **Sawada H**, Moorlegghen JJ, Weiland M, Daugherty A, Sheppard MB. Aortic strain correlates with elastin fragmentation in fibrillin-1 hypomorphic mice. *Circ Rep*. 2019; 1: 199-205.
 44. Okuno K, Naito Y, Yasumura S, **Sawada H**, Asakura M, Masuyama T, Ishihara M. Haploinsufficiency of Transferrin Receptor 1 Impairs Angiogenesis with Reduced

- Mitochondrial Complex I in Mice with Limb Ischemia. *Sci Rep.* 2019; 20: 9:13658.
45. Kukida M*, **Sawada H***, Alan Daugherty, Lu HS. Megalin in cardiovascular and renal functions: insights from mouse models. *Pharma Res.* 2020; 151: 104537.
* = equally contributed
 46. Yasumura S, Naito Y, Okuno K, **Sawada H**, Asakura M, Masuyama T, Ishihara M. Effects of heterozygous transferrin receptor 1 deletion in pathogenesis of renal fibrosis in mice. *Hypertension.* 2020; 75: 413-21.
 47. **Sawada H**, Ming C. Gong, Zhenheng Guo, Alan Daugherty, Hong S. Lu. High salt and IL-17 in aortic dissection. *Arterioscler Thromb Vasc Biol.* 2020; 40: 17-9.
 48. **Sawada H**, Kukida M, Chen X, Howatt DA, Moorlegghen JJ, Balakrishnan A, Wu C, Daugherty A, Lu HS. Angiotensin I infusion reveals differential effects of angiotensin-converting enzyme in aortic resident cells on aneurysm formation. *Circ J.* 2020; 84: 825-9.
 49. Liu J, **Sawada H**, Howatt DA, Moorlegghen JJ, Vsevolozhskaya OA, Daugherty A, Lu HS. Hypercholesterolemia accelerates both the initiation and progression of angiotensin II-induced abdominal aortic aneurysms. *Ann Vasc Med Res.* 2020; 6: 1099.
 50. **Sawada H**, Franklin MK, Moorlegghen JJ, Howatt DA, Kukida M, Lu HS, Daugherty A. Ultrasound monitoring of descending aortic aneurysms and dissections in mice. *Arterioscler Thromb Vasc Biol.* 2020; 40: 2557-9.
 51. Ito M, Wang W, Hao D, **Sawada H**, Huang B, Guo L, Daugherty A, Li X. Ultrasound monitoring of thymus involution in septic mice. *Ultrasound Med Biol.* 2020; 47: 769-76.
 52. Park J, Lucas AM, Zhang X, Chaudhary K, Josyula NS, Chittoor G, Ahmadmehrabi S, Drivas TG, Katz N, Chavali VRM, Fasolino M, Daugherty A, **Sawada H**, Zhang C, Li Y, Shen YH, LeMaire SA, Bradford Y, Verma A, Judy RL, Kember RL, Regeneron Genetics Center, Najj A, Kaestner K, Vahedi G, Chen J, Damrauer SM, Justice AE, Do R, Ritchie MD, Rader DJ. Exome-by-phenome-wide association with electronic health record phenotypes. *Nat Med.* 2021; 27: 66-72.
 53. **Sawada H**, Lu HS, Daugherty A. Single-cell transcriptomics as a building block for determining mechanistic insight of abdominal aortic aneurysm formation. *Cardiovasc Res.* 2021; 117: 1243-1244.
 54. Ohno-Urabe S, Kukida M, Franklin MK, Katsumata Y, Su W, Gong MC, Lu HS, Daugherty A, **Sawada H**. Authentication of in situ measurements for thoracic aortic aneurysms in mice. *Arterioscler Thromb Vasc Biol.* 2021; 41: 2117-2119.
 55. Kukida M*, **Sawada H***, Ohno-Urabe S, Howatt DA, Moorlegghen JJ, Poglitsch M, Daugherty A, Lu HS. Effects of endogenous angiotensin II on abdominal aortic aneurysms

and atherosclerosis in angiotensin II-infused mice. *J Am Heart Assoc.* 2021; 10: e020467.

* = equally contributed

56. Chen JZ*, **Sawada H***, Ye D, Katsumata Y, Kukida M, Ohno-Urabe S, Moorleghen JJ, Franklin MK, Howatt DA, Sheppard MB, Mullick AE, Lu HS, Daugherty A. Deletion of AT1a (Angiotensin II Type 1a) receptor or inhibition of angiotensinogen synthesis attenuates thoracic aortopathies in fibrillin1^{C1041G/+} Mice. *Arterioscler Thromb Vasc Biol.* 2021; 41: 2538-2550.

* = equally contributed

57. **Sawada H**, Daugherty A, Lu HS. From unbiased transcriptomics to understanding the molecular basis of atherosclerosis. *Curr Opin Lipidol.* 2021; 32: 328-329.

58. Kukida M, Cai L, Ye D, **Sawada H**, Katsumata Y, Franklin MK, Hecker PI, Campbell KS, Danser AHJ, Mullick AE, Daugherty A, Temel RE, Lu HS. Renal angiotensinogen is predominantly liver derived in nonhuman primates. *Arterioscler Thromb Vasc Biol.* 2021; 41: 2851-2853.

Non-Peer-Reviewed Articles, Editorials, Reviews in Professional, Scientific or Educational Journals

1. **Sawada H**, Katsumata Y, Higashi H, Zhang C, Li Y, Morgan S, Lee LH, Singh SA, Chen JZ, Moorleghen JJ, Howatt DA, Rateri DL, Shen YH, LeMaire SA, Aikawa M, Majesky MW, Lu HS, Daugherty A. Second heart field-derived cells contribute to angiotensin II-mediated ascending aortopathies. *bioRxiv.* 2020; doi: <https://doi.org/10.1101/2020.02.02.930917>.

B. ABSTRACT PRESENTATIONS

Local/State/Regional Meetings

1. 8/2016. **Sawada H**, Moorleghen JJ, Rateri DL, Daugherty A. Angiotensin II infusion does not influence distribution of cardiac neural crest-derived smooth muscle cells in the ascending aorta. Physiology Retreat, University of Kentucky, Lexington, KY. Poster.
2. 8/2016. **Sawada H**, Moorleghen JJ, Rateri DL, Daugherty A. Angiotensin II infusion does not influence distribution of cardiac neural crest-derived smooth muscle cells in the ascending aorta. 8th Annual PostDoc Poster Competition, University of Kentucky, Lexington, KY. Poster.
3. 11/2016. **Sawada H**, Moorleghen JJ, Rateri DL, Daugherty A. Angiotensin II infusion does not influence distribution of cardiac neural crest-derived smooth muscle cells in the ascending aorta. Cardiovascular Research Day, University of Kentucky, Lexington, KY. Poster.
4. 8/2017. **Sawada H**, Rateri DL, Majesky MW, Daugherty A. LRP1 deletion in smooth muscle cells in the outer aortic media promotes angiotensin II-induced thoracic aortic

aneurysm. 9th Annual PostDoc Poster Competition, University of Kentucky, Lexington, KY. Poster.

5. 11/2017. **Sawada H**, Rateri DL, Majesky MW, Daugherty A. LRP1 deletion in smooth muscle cells in the outer aortic media promotes angiotensin II-induced thoracic aortic aneurysm. Cardiovascular Research Day, University of Kentucky, Lexington, KY. Poster.
6. 5/2018. **Sawada H**, Wright BC, Rateri DL, Moorlegghen JJ, Howatt DA, Majesky MW, Daugherty A. LRP1 Deletion in smooth muscle cells of second heart field origin accelerates angiotensin II-induced thoracic aortic aneurysm formation. Physiology Retreat, University of Kentucky, Lexington, KY. Poster.
7. 8/2018. **Sawada H**, Wright BC, Rateri DL, Moorlegghen JJ, Howatt DA, Majesky MW, Daugherty A. LRP1 deletion in smooth muscle cells of second heart field origin accelerates angiotensin II-induced thoracic aortic aneurysm formation. 10th Annual PostDoc Poster Competition, University of Kentucky, Lexington, KY. Poster.
8. 11/2018. **Sawada H**, Wright BC, Rateri DL, Moorlegghen JJ, Howatt DA, Majesky MW, Daugherty A. LRP1 Deletion in smooth muscle cells of second heart field origin accelerates angiotensin II-induced thoracic aortic aneurysm formation. Cardiovascular Research Day, University of Kentucky, Lexington, KY. Poster.
9. 5/2019. **Sawada H**, Higashi H, Wright BC, Rateri DL, Moorlegghen JJ, Howatt DA, Lee LH, Singh SA, Aikawa M, Majesky MW, Daugherty A. Protective role of second heart field-derived smooth muscle cells in thoracic aortic aneurysm formation. Physiology Retreat, University of Kentucky, Lexington, KY. Poster.
10. 8/2019. **Sawada H**, Higashi H, Wright BC, Rateri DL, Moorlegghen JJ, Howatt DA, Lee LH, Singh SA, Aikawa M, Majesky MW, Daugherty A. Protective role of second heart field-derived smooth muscle cells in thoracic aortic aneurysm formation. 11th Annual PostDoc Poster Competition, University of Kentucky, Lexington, KY. Poster.
11. 11/2019. **Sawada H**, Higashi H, Wright BC, Rateri DL, Moorlegghen JJ, Howatt DA, Lee LH, Singh SA, Aikawa M, Majesky MW, Daugherty A. Protective role of second heart field-derived smooth muscle cells in thoracic aortic aneurysm formation. Cardiovascular Research Day, University of Kentucky, Lexington, KY. Poster.
12. 8/2020. **Sawada H**, Daugherty A. Functional role of second heart Field-derived cells on thoracic aortic aneurysm formation. 2020 SOPS Research Competition, University of Kentucky, Lexington, KY. Poster.

National/International Meetings

1. 11/2012. **Sawada H**, Naito Y, Eguchi A, Okuhara Y, Iwasaku T, Hirotsu S, Masuyama T. Expression of interleukin-33 and ST2 in nonrheumatic aortic valve stenosis. AHA Scientific Sessions 2012. Los Angeles, CA. **Oral presentation.**
2. 11/2013. **Sawada H**, Naito Y, Eguchi A, Okuhara Y, Iwasaku T, Hirotsu S, Masuyama T. Dietary iron restriction attenuates hypertension and renal injury in aldosterone/salt-induced hypertensive mice. AHA Scientific Sessions 2013. Dallas, TX. Poster.
3. 11/2013. **Sawada H**, Naito Y, Eguchi A, Okuhara Y, Iwasaku T, Hirotsu S, Masuyama T. Increased iron accumulation in human abdominal aortic aneurysm. AHA Scientific Sessions 2013. Dallas, TX. Poster.
4. 11/2013. **Sawada H**, Naito Y, Eguchi A, Okuhara Y, Iwasaku T, Hirotsu S, Masuyama T. Iron restriction reduces abdominal aortic aneurysm formation in angiotensin II-infused apolipoprotein E deficient mice. AHA Scientific Sessions 2013. Dallas, TX. Poster.
5. 3/2014. **Sawada H**, Naito Y, Eguchi A, Okuhara Y, Iwasaku T, Hirotsu S, Masuyama T. Involvement of iron accumulation in human abdominal aortic aneurysm. ACC Scientific Sessions 2013. Washington, DC. Poster.
6. 4/2014. **Sawada H**, Naito Y, Eguchi A, Okuhara Y, Iwasaku T, Hirotsu S, Masuyama T. Iron involvement in human abdominal aortic aneurysm. International Vascular Biology Meeting 2014. Kyoto, Japan. Poster.
7. 6/2014. **Sawada H**, Naito Y, Eguchi A, Okuhara Y, Iwasaku T, Hirotsu S, Masuyama T. The effects of iron restriction on hypertension and renal injury in aldosterone/salt-induced hypertensive mice. Hypertension 2014. Athens, Greece. Poster.
8. 11/2014. **Sawada H**, Naito Y, Eguchi A, Morisawa D, Okuhara Y, Iwasaku T, Hirotsu S, Masuyama T. Pentraxin 3 expression in human aortic abdominal aneurysm. AHA Scientific Sessions 2014. Chicago, IL. Poster.
9. 3/2015. **Sawada H**, Naito Y, Eguchi A, Okuhara Y, Iwasaku T, Hirotsu S, Tohru S. Transferrin receptor 1 is involved in the mechanism of human vascular remodeling in Atherosclerotic Lesions. ACC Scientific Sessions 2015. San Diego, CA. Poster.
10. 5/2016. **Sawada H**, Rateri DL, Majesky MW, Daugherty A. Angiotensin II infusion does not influence the distribution of cardiac neural crest-derived smooth muscle cells in the ascending aorta. ATVB/PAD 2016 Scientific Sessions. Nashville, TN. Poster. **Young Investigator Travel Award.**
11. 5/2016. **Sawada H**, Rateri DL, Majesky MW, Daugherty A. Second heart field-derived smooth muscle cells contribute to angiotensin II-induced medial thickness in the ascending aorta. AHA Scientific Sessions 2016. New Orleans, LA. **Oral Presentation. Young Investigator Travel Award.**

12. 5/2017. **Sawada H**, Rateri DL, Majesky MW, Daugherty A. LRP1 deletion in smooth muscle cells of the outer aortic media promotes angiotensin II-induced thoracic aortic aneurysm. ATVB/PAD 2017 Scientific Sessions. Minneapolis, MN. Poster.
13. 5/2018. **Sawada H**, Rateri DL, Wright BC, Moorleghen JJ, Howatt DA, Majesky MW, Daugherty A. Smooth muscle origin-specific effects of LRP1 deletion on angiotensin II-induced ascending aortic aneurysm. ATVB/PAD 2018 Scientific Sessions. San Francisco, CA. Poster.
14. 5/2019. **Sawada H**, Higashi H, Wright BC, Rateri DL, Moorleghen JJ, Howatt DA, Lee LH, Singh SA, Aikawa M, Majesky MW, Daugherty A. Protective role of LRP1 in second heart field-derived smooth muscle cells against angiotensin II-induced thoracic aortic aneurysm. ATVB/PAD 2019 Scientific Sessions. Boston, MA. Poster.
15. 5/2020. **Sawada H**, Franklin MK, Moorleghen JJ, Howatt DA, Lu HS, Daugherty A. Development of descending aortic aneurysms and dissections detected by high frequency ultrasound. Vascular Discovery: From Genes to Medicine Scientific Sessions 2020. Poster.
16. 9/2021. **Sawada H, Zhang C, Li Y, Katsumata Y, Shen YH, LeMaire SA, Lu HS, Daugherty A**. Transcriptomic modulation of second heart field-derived smooth muscle cells in angiotensin II-infused mice promotes aortopathy. Vascular Discovery: From Genes to Medicine Scientific Sessions 2021. Moderate Poster.

C. SPONSORED RESEARCH PROJECTS, GRANT & CONTRACT ACTIVITIES

Inactive

Project Title: Impact of Dietary Iron Restriction on Abdominal Aortic Aneurysm Formation
Project Number: 2012-1
Principal Investigator(s): Hisashi Sawada, MD
Role in Project: PI
Effort: 30 %
Institution/University: Hyogo College of Medicine, Japan
Source of Funding: Hyogo College of Medicine, Japan
Duration of Project: 04/2012 - 03/2014
Total Award: \$7,000
Grant Number: 2012-1

Project Title: Effects of Iron in the Pathophysiology of Abdominal Aortic Aneurysms
Project Number: 26860590
Principal Investigator(s): Hisashi Sawada, MD, PhD
Role in Project: PI
Effort: 30 %
Institution/University: Hyogo College of Medicine, Japan
Source of Funding: Japan Society for the Promotion of Science
Duration of Project: 04/2013 - 03/2015
Total Award: \$25,000
Grant Number: 26860590

Project Title: The Impact of Smooth Muscle Cell Embryonic Origin on TGF - beta Signaling During Thoracic Aortic Aneurysm Formation
Project Number: 18POST33990468
Principal Investigator(s): Hisashi Sawada, MD, PhD
Role in Project: PI
Effort: 100 %
Institution/University: University of Kentucky
Source of Funding: American Heart Association
Duration of Project: 07/2018 – 06/2020
Total Award: \$122,960
Grant Number: 18POST33990468

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