January 28, 2025

CURRICULUM VITAE

I. COMPLETE NAME

Masaki Mizuno, Ph.D.
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II. EDUCATION

UT Southwestern Medical Center, Dallas, TX	Postdoctoral Fellow	05/2011
Waseda University, Tokyo, JAPAN	PhD	03/2005
Waseda University, Tokyo, JAPAN	MS	03/2002
Waseda University, Tokyo, JAPAN	BS	03/2000

III. PROFESSIONAL EXPERIENCE

1. Academic:

09/2020-present	Associate Professor Department of Applied Clinical Research, University of Texas Southwestern Medical Center at Dallas
11/2019-08/2020	Assistant Professor Department of Applied Clinical Research, University of Texas Southwestern Medical Center at Dallas
04/2014-10/2019	Assistant Professor Department of Health Care Sciences, University of Texas Southwestern Medical Center at Dallas
06/2011-03/2013	Instructor Department of Health Care Sciences, University of Texas Southwestern Medical Center at Dallas
05/2009-05/2011	Postdoctoral Research Fellow Department of Physical Therapy, University of Texas Southwestern Medical Center at Dallas
04/2009-10/2011	Postdoctoral Research Fellow Japan Society for the Promotion of Science (JSPS), Research Fellowships for Young Scientists
09/2008-03/2009	Part time Instructor (Sports Nutrition) School of Law, Setsunan University
09/2007-03/2009	Part time Instructor (Health Science, Sports Sciences)

	Faculty of Service Industries, University of Marketing and Distribution Sciences
04/2006-03/2009	Research Fellow Department of Cardiovascular Dynamics, National Cardiovascular, Center Research Institute
04/2005-03/2006	Research Associate Faculty of Sport Sciences, Waseda University
04/2005-03/2006	Visiting Researcher Positron Medical Center, Tokyo Metropolitan Institute of Gerontology

2. Administrative: Title, Institution, Inclusive Dates
N/A
3. Hospital/Agency: Title, Institution, Inclusive Dates
N/A
4. Other: Place, Inclusive Dates
N/A

IV. CERTIFICATION OR BOARD STATUS

N/A

V. LICENSES

N/A

VI. RESEARCH AND SCHOLARSHIP

1. Research Grants and Contracts

Pending

Title: Role of amyloid β in abnormal blood pressure regulation in diabetes
Purpose: These studies are designed to determine whether amyloid β contributes to the blunted cardiovascular and sympathetic responses during exercise in diabetes.
Funding Agency: NIH R01HL180593
Funding Date: 07/01/2025-06/30/2030
Requested funding: $ 2,050,000
Principal Investigator: M. Mizuno, 20% effort

Present

Title: Preventing Hypertension and Sympathetic Overactivation by Targeting Metabolic Acidosis in CKD

Purpose: These studies are designed to determine whether metabolic acidosis contributes to chronic kidney disease-induced sympathetic overactivation and hypertensive responses during exercise.
Funding Agency: Pilot Award, Center for Mineral Metabolism and Clinical Research, UTSW
Funding Dates: 07/01/2024-06/30/2025
Amount Award: $50,000
Principal Investigator: W. Vongpatanasin and M. Mizuno
Role: Co-Principal Investigator, 5% effort

Title: Targeting Metabolic Acidosis for Treating Hypertension and Sympathetic Overactivation in Chronic Kidney Disease
Purpose: These studies are designed to determine whether metabolic acidosis contributes to chronic kidney disease-induced sympathetic overactivation and hypertensive responses during exercise.
Funding Agency: Career Development Award-American Heart Association
Funding Dates: 04/01/2024-03/31/2027
Amount Award: $231,000
Principal Investigator: H.K. Kim
Role: Co-Investigator, 5% effort

Title: Impact of glucocorticoid-induced mechanobiological alterations in cardiovascular control under chronic stress
Purpose: These studies are designed to determine the effect of chronic stress on cardiovascular regulation.
Funding Agency: Overseas Research Fellowship, JSPS
Funding Dates: 04/01/2024-03/31/2026
Amount Award: $82,000
Principal Investigator: A. Hori
Role: Mentor

Title: Impacts of excessive dietary linoleic acid on muscle afferents and the exercise pressor reflex
Purpose: These studies are designed to determine the contributions of linoleic acid to the development of exercise pressor reflex dysfunction.
Funding Agency: SHP Interdisciplinary Research Grant Program-UTSW
Funding Dates: 09/01/2023-08/31/2025
Amount Award: $20,000
Principal Investigator: J. A. Estrada
Role: Co-Investigator

Title: Impact of amyloid-β accumulation before diagnosis of Alzheimer's disease on blood pressure variability
Purpose: These studies are designed to determine the effect of amyloid-β accumulation to the development of blood pressure variability in Alzheimer's disease.
Funding Agency: Postdoctoral Fellowships, JSPS
Funding Dates: 04/01/2023-03/31/2026

Amount Award: $130,000
Principal Investigator: A. Fukazawa
Role: Mentor

Title: Mechanobiological mechanisms in the exercise pressor reflex
Purpose: These studies are designed to determine candidate molecules for the mechano-sensitive channels involved in exercise pressor reflex.
Funding Agency: Fund for the Promotion of Joint International Research (Fostering Joint International Research (B), Grant-in-Aid for Scientific Research – JSPS
Funding Dates: 10/01/2022-03/31/2027
Amount Awarded: $ 140,000
Principal Investigator: N. Hotta
Role: Collaborator

Title: Targeting Insulin Resistance to Improve Abnormal Cardiovascular Control in Diabetes
Purpose: These studies are designed to determine the contributions of hyperinsulinemia to the development of exercise pressor reflex dysfunction in diabetes.
Funding Agency: NIH NHLBI (R01HL151632)
Funding Dates: 06/01/2020-5/31/2025 (NCE)
Amount requested: $ 1,971,528
Principal Investigator: M. Mizuno, 30% effort

<u>Completed</u>

Title: Impact of glucocorticoid-induced mechanobiological alterations in cardiovascular control under chronic stress
Purpose: These studies are designed to determine the effect of chronic stress on cardiovascular regulation.
Funding Agency: Postdoctoral Fellowships, JSPS
Funding Dates: 04/01/2023-03/31/2024
Amount Award: $40,000
Principal Investigator: A. Hori
Role: Mentor

Title: Impact of amyloid-β accumulation before diagnosis of Alzheimer's disease on blood pressure variability
Purpose: These studies are designed to determine the effect of amyloid-β accumulation on the development of blood pressure variability in Alzheimer's disease.
Funding Agency: Pilot Synergy Grants for Collaborative Research- UTSW
Funding Dates: 03/01/2022-02/28/2023
Amount Award: $ 100,000
Principal Investigator: M. Mizuno, 5% effort

Title: Amyloid-β and abnormal blood pressure control
Purpose: These studies are designed to determine the effect of amyloid-β accumulation on the development of blood pressure variability in Alzheimer's disease.
Funding Agency: Overseas Postdoctoral Fellowships, The Uehara Memorial Foundation

Funding Dates: 04/01/2022-03/31/2023
Amount Award: $30,000
Principal Investigator: A. Fukazawa
Role: Mentor

Title: Control of blood pressure by gut-derived toxins in muscle sensory neuron
Purpose: These studies are designed to determine the contributions of gut gram-negative bacteria such as lipopolysaccharides to the development of exercise pressor reflex dysfunction in obesity.
Funding Agency: SHP Interdisciplinary Research Grant Program-UTSW
Funding Dates: 09/01/2021-08/31/2022
Amount Award: $13,000
Principal Investigator: R. Ishizawa
Role: Co-Investigator

Title: Preventing Hypertension and Sympathetic Overactivation by Targeting Phosphate
Purpose: These studies are designed to determine the contributions of phosphate in the development of hypertension and sympathetic overactivation.
Funding Agency: NIH R01 HL113738
Funding Dates: 04/01/2017-03/31/2022 (No cost extension)
Amount Awarded: $3,169,816
Principal Investigator: W. Vongpatanasin
Role: Collaborator, 10% effort

Title: The impact of exercise intensity on brain derived neurotrophic factor in Parkinson's disease: A Pilot study, from the bench to the clinic
Purpose: These studies are designed to determine the impact of exercise intensity on BDNF and functional outcomes in a parallel model of PD in rats and humans.
Funding Agency: Interdisciplinary Research Grant Program, UTSW
Funding Dates: 09/01/2019-08/31/2020
Amount Awarded: $10,000
Principal Investigator: S. Shearin
Role: Co-Principal Investigator

Title: Neuroprotective and metabolic effects of geranylgeraniol and δ–tocotrienol in streptozotocin-induced Alzheimer's rat models
Purpose: These studies are designed to elucidate potential impact of geranylgeraniol and δ-tocotrienol on Aβ- and metabolic-related disturbances in the Alzheimer's disease animal model.
Funding Agency: Interdisciplinary Research Grant Program, UTSW
Funding Dates: 09/01/2019-08/31/2020
Amount Awarded: $10,000
Principal Investigator: H. Yeganehjoo
Role: Co-Principal Investigator

Title: The Role of Insulin in Augmenting Exercise Pressor Reflex Function in Diabetes
Purpose: These studies are designed to determine the contributions of hyperinsulinemia to the development of exercise pressor reflex dysfunction in diabetes.

Funding Agency: Grant-in-Aid for Scientific Research - JSPS
Funding Dates: 04/01/2017-03/31/2020
Amount Awarded: $46,800
Principal Investigator: N. Hotta
Role: Collaborator

Title: Targeting Insulin Resistance to Improve Abnormal Cardiovascular Control in Diabetes
Purpose: These studies are designed to determine the mechanisms responsible for the development of abnormal exercise pressor reflex function in type 2 diabetes.
Funding Agency: Interdisciplinary Research Grant Program, UTSW
Funding Dates: 09/01/2018-08/31/2019
Amount Awarded: $14,000
Principal Investigator: M. Mizuno

Title: Hyperinsulinemia Augments Exercise Pressor Reflex Function in Diabetes
Purpose: These studies are designed to determine the contributions of hyperinsulinemia to the development of exercise pressor reflex dysfunction in diabetes.
Funding Agency: Grants for scientific research-The Nakatomi Foundation
Funding Dates: 04/01/2018-03/31/2019
Amount Awarded: $10,000
Principal Investigator: N. Hotta
Role: Collaborator

Title: Impact of geranylgeraniol and d-8-tocotrienol on the cognitive function and hippocampal protein biomarkers in streptozotocin-induced Alzheimer's rat models.
Purpose: These studies are designed to determine effect of geranylgeraniol and d-8-tocotrienol diet on the cognitive function in Alzheimer's disease.
Funding Agency: SHP Interdisciplinary Research Grant Program-UTSW
Funding Dates: 09/01/2017-08/31/2018
Amount Awarded: $14,000
Principal Investigator: H. Yeganehjoo
Role: Co-Principal Investigator

Title: The Role of Aldosterone in Augmenting Exercise Pressor Reflex Function in Hypertension
Purpose: These studies are designed to determine the contributions of hyperaldosteronism to the development of exercise pressor reflex dysfunction in hypertension.
Funding Agency: NIH R01 HL113738
Funding Dates: 02/01/2013-01/31/2017
Amount Awarded: $2,754,975
Principal Investigator: W. Vongpatanasin
Role: Collaborator, 10% effort

Title: The Role of Klotho in Sympathetic Regulation in Hypertension
Purpose: These studies are designed to determine the role of Klotho in the development of abnormal autonomic function during physical exercise in hypertensive rats.
Funding Agency: O'Brien Kidney Research Center P&F Grant-UTSW

Funding Dates: 06/01/2015-05/31/2016
Amount Awarded: $35,000
Principal Investigator: M. Mizuno, 30% effort

2. Teaching Materials Developed

N/A

3. Other Scholarly Activities and Creative Achievements

N/A

VII. PUBLICATIONS

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1. Refereed journals

1) Amane Hori, Daisuke Kume, Ryuji Saito, Daisuke Hasegawa1, Kenichi Suijo, **Masaki Mizuno**, and Norio Hotta. Two-week Paramedic Hospital Training Augments Blood Pressure Response to Isometric Handgrip Exercise in Healthy Young Men. *American Journal of Physiology Regulatory, Integrative and Comparative Physiology doi: 10.1152/ajpregu.00258.2024.*
2) Amane Hori, Xin Su, Syota Sagasaki, Ryuji Saito, Kenichi Suijo, Seiko Miyata, Daisuke Hasegawa, **Masaki Mizuno**, and Norio Hotta. Sleep Deprivation Elevates Resting and Exercise Blood Pressures and Augments Pressor Response at the Exercise Onset. *Medicine & Science in Sports & Exercise doi: 10.1249/MSS.0000000000003640*
3) Juan A. Estrada, Rie Ishizawa, Han-Kyul Kim, Ayumi Fukazawa, Amane Hori, Norio Hotta, Gary A. Iwamoto, Scott A. Smith, Wanpen Vongpatanasin, and **Masaki Mizuno**. Intracerebroventricular insulin injection acutely normalizes the augmented exercise pressor reflex in a rat model of type 2 diabetes mellitus. *Journal of Physiology doi: 10.1113/JP286715*
4) Juan A. Estrada, Norio Hotta, Han-Kyul Kim, Rie Ishizawa, Ayumi Fukazawa, Gary A. Iwamoto, Scott A. Smith, Wanpen Vongpatanasin, and **Masaki Mizuno**. Blockade of endogenous insulin receptor signaling in the nucleus tractus solitarius potentiates exercise pressor reflex function in healthy male rats. *FASEB Journal* Vol. 37: No. 9: e23141. doi: 10.1096/fj.202300879RR.
5) Hideaki Kashima, Masako Yamaoka Endo, Masako Kanda, Akira Miura, Yoshiyuki Fukuba, and **Masaki Mizuno**. High-glycemic index meal acutely potentiates blood pressure response to static handgrip exercise in healthy humans. *Journal of Applied Physiology* Vol. 135: No. 3: 609-620, 2023.
6) Alec L.E. Butenas, Rie Ishizawa, Korynne S. Rollins, **Masaki Mizuno**, and Steven W. Copp. Sex dependent attenuating effects of capsaicin administration on the mechanoreflex in healthy rats. *American Journal of Physiology Heart and Circulatory Physiology* Vol. 325: No. 2: H372-H384, 2023.
7) Rie Ishizawa, Juan A. Estrada, Han-Kyul Kim, Norio Hotta, Ayumi Fukazawa, Gary A. Iwamoto, Scott A. Smith, Wanpen Vongpatanasin, and **Masaki Mizuno**. Neural discharge of muscle afferents and pressor response to mechanical stimulation are associated with muscle deformation velocity in rats. *American Journal of Physiology Regulatory, Integrative and Comparative Physiology* Vol. 325: No. 1: R13-R20, 2023.

8) Ayumi Fukazawa, Amane Hori, Hotta Norio, Kimiaki Katanosaka, Juan A. Estrada, Rie Ishizawa, Han-Kyul Kim, Gary A. Iwamoto, Scott A. Smith, Wanpen Vongpatanasin, and **Masaki Mizuno**. Antagonism of TRPV4 channels partially reduces mechanotransduction in rat skeletal muscle afferents. *Journal of Physiology* Vol. 601: No. 8: 1407-1424, 2023.
9) Kanji Matsukawa, Gary A. Iwamoto, Jere H. Mitchell, **Masaki Mizuno**, Han-Kyul Kim, Jon W. Williamson, Scott A. Smith. Exaggerated renal sympathetic nerve and pressor responses during spontaneously-occurring motor activity in hypertensive rats. *American Journal of Physiology Regulatory, Integrative and Comparative Physiology* Vol. 324, No. 4: R497-R512, 2023.
10) Han-Kyul Kim, Rie Ishizawa, Ayumi Fukazawa, Zhongyun Wang, Ursa Bezan Petric, Ming-Chang Hu, Scott A. Smith, **Masaki Mizuno**, and Wanpen Vongpatanasin. Dapagliflozin Attenuates Sympathetic and Pressor Responses to Stress in Young Prehypertensive Spontaneously Hypertensive Rats. *Hypertension*. Vol. 79: No. 8: 1824–1834, 2022.
11) Amane Hori, Norio Hotta, Ayumi Fukazawa, Juan A. Estrada, Kimiaki Katanosaka, Kazue Mizumura, Jun Sato, Rie Ishizawa, Han Kyul Kim, Gary A Iwamoto, Wanpen Vongpatanasin, Jere H Mitchell, Scott A. Smith, and **Masaki Mizuno**. Insulin potentiates the response to capsaicin in dorsal root ganglion neurons in vitro and muscle afferents ex vivo in normal healthy rodents. *Journal of Physiology* Vol. 600, No. 3: 531-545, 2022.
12) Daisuke Hasegawa, Amane Hori, Yukiko Okamura, Reizo Baba, Kenichi Suijo, **Masaki Mizuno**, Jun Sugawara, Koji Kitatsuji, Hisayoshi Ogata, Kaoru Toda, Norio Hotta. Aging exaggerates blood pressure response to ischemic rhythmic handgrip exercise in humans. *Physiological Reports* Nov; 9(22): e15125, 2021.
13) Poghni A. Peri-Okonny, Alejandro Velasco, Hamza Lodhi, Zhongyun Wang, Debbie Arbique, Beverley Adams-Huet, Gary Iwamoto, Jere H. Mitchell, **Masaki Mizuno**, Scott Smith, Wanpen Vongpatanasin. Differential Effects of Eplerenone vs. Amlodipine on Muscle Metaboreflex Function in Hypertensive Humans. *Journal of Clinical Hypertension* Vol. 23, No. 9: 1706-1714, 2021.
14) Rie Ishizawa, Han-Kyul Kim, Norio Hotta, Gary A. Iwamoto, Jere H. Mitchell, Scott A. Smith, Wanpen Vongpatanasin and **Masaki Mizuno**. TRPV1 sensitization of skeletal muscle afferents in type 2 diabetic rats with hyperglycemia. *Hypertension* Vol. 77, No. 4: 1360-1371, 2021.
15) Norio Hotta, Amane Hori, Yukiko Okamura, Reizo Baba, Hidehiro Watanabe, Jun Sugawara, Wanpen Vongpatanasin, Jijia Wang, Han-Kyul Kim, Rie Ishizawa, Gary A. Iwamoto, Jere H. Mitchell, Scott A. Smith and **Masaki Mizuno**. Insulin resistance is associated with an exaggerated blood pressure response to ischemic rhythmic handgrip exercise in nondiabetic older adults. *Journal of Applied Physiology*. Vol. 129, No. 1: 144-151, 2020.
16) Rie Ishizawa, Han-Kyul Kim, Norio Hotta, Gary A. Iwamoto, Wanpen Vongpatanasin, Jere H. Mitchell, Scott A. Smith and **Masaki Mizuno**. Skeletal muscle reflex-induced sympathetic dysregulation and sensitization of muscle afferents in type 1 diabetic rats. *Hypertension*. Vol. 75, No. 4: 1072-1081, 2020.
17) Norio Hotta, Kimiaki Katanosaka, Kazue Mizumura, Gary A. Iwamoto, Rie Ishizawa, Han-Kyul Kim, Wanpen Vongpatanasin, Jere H. Mitchell, Scott A. Smith and **Masaki Mizuno**. Insulin potentiates the response to mechanical stimuli in small dorsal root ganglion neurons and thin fiber muscle afferents in vitro. *Journal of Physiology Vol. 597, No. 20: 5049-5062, 2019.*

18) Han-Kyul Kim, Norio Hotta, Rie Ishizawa, Gary A. Iwamoto, Wanpen Vongpatanasin, Jere H. Mitchell, Scott A. Smith and **Masaki Mizuno**. Exaggerated pressor and sympathetic responses to stimulation of the mesencephalic locomotor region and exercise pressor reflex in type II diabetic rats. *American Journal of Physiology Regulatory, Integrative and Comparative Physiology*. Vol. 317, No. 2: R270-279, 2019.
19) Nan Liang, Gary A. Iwamoto, Ryan M. Downey, Jere H. Mitchell, Scott A. Smith **and Masaki Mizuno**. The pressor response to concurrent stimulation of the mesencephalic locomotor region and peripheral sensory afferents is attenuated in normotensive but not hypertensive rats. *Frontiers in Physiology*. Vol.10, No.95: 1-11, 2019.
20) Ryan M. Downey, **Masaki Mizuno**, Jere H. Mitchell, Wanpen Vongpatanasin and Scott A. Smith. Mineralocorticoid receptor antagonists attenuate exaggerated exercise pressor reflex responses in hypertensive rats. *American Journal of Physiology Heart and Circulatory Physiology Vol. 313, No.4: H788-794, 2017.*
21) **Masaki Mizuno**, Jere H. Mitchell, Scott Crawford, Chou-Long Huang, Naim Maalouf, Ming-Chang Hu, Orson Moe, Scott A. Smith, and Wanpen Vongpatanasin. High Dietary Phosphate Intake Induces Hypertension and Augments Exercise Pressor Reflex Function in Rats. *American Journal of Physiology Regulatory, Integrative and Comparative Physiology* Vol. 311, No.1: R39-48, 2016.
22) Nan Liang, Jere H. Mitchell, and Scott A. Smith and **Masaki Mizuno** Exaggerated sympathetic and cardiovascular responses to stimulation of the mesencephalic locomotor region in spontaneously hypertensive rats. *American Journal of Physiology Heart and Circulatory Physiology* Vol. 310, No.1: H123-131, 2016.
23) Young-tae Kim, Aswini Kanneganti, Caleb Nothnagle, Ryan Landrith, **Masaki Mizuno**, Muthu B.J. Wijesundara, Scott A. Smith, Mario I. Romero-Ortega. Microchannel Electrode Stimulation of Deep Peroneal Nerve Fascicles Induced Mean Arterial Depressor Response in Hypertensive Rats. *Bioelectronic Medicine* Vol.2: 55-62, 2015.
24) **Masaki Mizuno**, Gary A. Iwamoto, Wanpen Vongpatanasin, Jere H. Mitchell, and Scott A. Smith. Dynamic exercise training prevents exercise pressor reflex overactivity in spontaneously hypertensive rats. *American Journal of Physiology Heart and Circulatory Physiology* Vol.309, No.5: 762-770, 2015.
25) **Masaki Mizuno**, Ryan M. Downey, Jere H. Mitchell, Richard J. Auchus, Scott A. Smith and Wanpen Vongpatanasin. Aldosterone and Salt Loading Independently Exacerbate the Exercise Pressor Reflex in Rats. *Hypertension* Vol.66, No.3: 627–633, 2015.
26) Scott A. Smith, Anna K. Leal, Megan N. Murphy, Ryan M. Downey and Masaki Mizuno. Muscle mechanoreflex overactivity in hypertension: a role for centrally-derived nitric oxide. *Autonomic Neuroscience: Basic & Clinical Vol*.188: 58-63, 2015.
27) **Masaki Mizuno**, Gary A. Iwamoto, Wanpen Vongpatanasin, Jere H. Mitchell and Scott A. Smith. Exercise training improves functional sympatholysis in spontaneously hypertensive rats through a nitric oxide dependent mechanism. *American Journal of Physiology Heart and Circulatory Physiology* Vol.307, No. 2: H242-251, 2014.
28) **Masaki Mizuno**, German Lozano, Khurrum Siddique, Michel Baum, and Scott A. Smith. Enalapril attenuates the exaggerated sympathetic response to physical stress in prenatally programmed hypertensive rats. *Hypertension* Vol.63, No. 2: 324–329, 2014.
29) Megan N. Murphy, **Masaki Mizuno**, Ryan M. Downey, Jack Squiers, Kate Squiers, Scott A. Smith. Neuronal nitric oxide synthase expression is lower in area of the nucleus tractus

solitarius excited by skeletal muscle reflexes in hypertensive rats. *American Journal of Physiology Heart and Circulatory Physiology* Vol.304, No.11: 1547-1557, 2013.

30) Toru Kawada, Meihua Li, Shuji Shimizu, Atsunori Kamiya, Kazunori Uemura, Michael J. Turner, **Masaki Mizuno**, and Masaru Sugimachi. High-frequency dominant depression of peripheral vagal control of heart rate in rats with chronic heart failure. *Acta Physiologica* Vol. 207, No. 1: 494-502, 2013.
31) **Masaki Mizuno**, Khurrum Siddique, Michel Baum, and Scott A. Smith. Prenatal programming of hypertension induces sympathetic overactivity in response to physical stress. *Hypertension* Vol.61, No. 1: 180–186, 2013.
32) Toru Kawada, Kazunori Uemura, Shuji Shimizu, Atsunori Kamiya, Michael J. Turner, **Masaki Mizuno**, Kenji Sunagawa and Masaru Sugimachi. Consideration on Parameter Determination of a New Model Describing Dynamic Vagal Heart Rate Control in Rats. *Conference Proceedings: Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, 3809-3812, 2012.
33) Shuji Shimizu, Tsuyoshi Akiyama, Toru Kawada, Yusuke Sata, **Masaki Mizuno**, Atsunori Kamiya, Toshiaki Shishido, Masashi Inagaki, Mikiyasu Shirai, Shunji Sano, and Masaru Sugimachi. Medetomidine, an α2-adrenergic agonist, activates cardiac vagal nerve through modulating baroreflex control. *Circulation Journal* Vol.76, No.1: 152–159, 2012.
34) **Masaki Mizuno**, Megan N. Murphy, Jere H. Mitchell, Scott A. Smith. Antagonism of the TRPv1 receptor partially corrects muscle metaboreflex overactivity in spontaneously hypertensive rats. *Journal of Physiology* Vol.589, No.24: 6191–6204, 2011.
35) **Masaki Mizuno**, Toru Kawada, Atsunori Kamiya, Tadayoshi Miyamoto, Shuji Shimizu, Toshiaki Shishido, Scott A. Smith and Masaru Sugimachi. Exercise training augments the dynamic heart rate response to vagal but not sympathetic stimulation in rats. *American Journal of Physiology Regulatory, Integrative and Comparative Physiology* Vol.300, No.4: 969–977, 2011.
36) **Masaki Mizuno**, Megan N. Murphy, Jere H. Mitchell, and Scott A. Smith. Skeletal muscle reflex-mediated changes in sympathetic nerve activity are abnormal in spontaneously hypertensive rats. *American Journal of Physiology Heart and Circulatory Physiology* Vol. 300, No. 3: 968–977, 2011
37) **Masaki Mizuno**, Toru Kawada, Atsunori Kamiya, Tadayoshi Miyamoto, Shuji Shimizu, Toshiaki Shishido, Scott A. Smith and Masaru Sugimachi. Dynamic characteristics of heart rate control by the autonomic nervous system in rats. *Experimental Physiology* Vol. 95, No.9: 919–925, 2010.
38) Atsunori Kamiya, Toru Kawada, **Masaki Mizuno**, Shuji Shimizu, and Masaru Sugimachi. Parallel resetting of arterial baroreflex control of renal and cardiac sympathetic nerve activities during upright tilt in rabbits. *American Journal of Physiology Heart and Circulatory Physiology* Vol. 298, No. 6: 1966–1975, 2010.
39) **Masaki Mizuno**, Ken Tokizawa, and Isao Muraoka. Changes in perfusion related to muscle length affect the pressor response to isometric exercise. *Advances in Experimental Medicine and Biology* Vol. 662: 371–378, 2010.
40) Shuji Shimizu, Tsuyoshi Akiyama, Toru Kawada, Toshiaki Shishido, **Masaki Mizuno**, Atsunori Kamiya, Toji Yamazaki, Shunji Sano, Masaru Sugimachi. In vivo direct monitoring of sympathetic nerve activity at the sinoatrial node. *Autonomic Neuroscience: Basic & Clinical* Vol.152, No. 1-2: 115–118, 2010

41) Shuji Shimizu, Tsuyoshi Akiyama, Toru Kawada, Toshiaki Shishido, Toji Yamazaki, Atsunori Kamiya, **Masaki Mizuno**, Shunji Sano, Masaru Sugimachi. In Vivo Direct Monitoring of Vagal Acetylcholine Release to the Sinoatrial Node. *Autonomic Neuroscience: Basic & Clinical* Vol.148, No. 1-2: 44–49, 2009.
42) Toru Kawada, **Masaki Mizuno**, Shimizu Shuji, Kazunori, Uemura, Atsunori, Kamiya, and Masaru Sugimachi. Angiotensin II disproportionally attenuates dynamic vagal and sympathetic heart rate controls. *American Journal of Physiology Heart and Circulatory Physiology* Vol. 296, No. 5: H1666–1674, 2009.
43) **Masaki Mizuno**, Atsunori Kamiya, Toru Kawada, Tadayoshi Miyamoto, Shuji Shimizu, Toshiaki Shishido, and Masaru Sugimachi. Accentuated antagonism in vagal heart rate control mediated through muscarinic potassium channels. *Journal of Physiological Sciences* Vol. 58, No.6: 381–388, 2008.
44) Tadayoshi Miyamoto, Toru Kawada, Yusuke Yanagiya, Tsuyoshi Akiyama, Atsunori Kamiya, **Masaki Mizuno**, Hiroshi Takaki, Kenji Sunagawa, and Masaru Sugimachi. Contrasting effects of presynaptic α2-adrenergic autoinhibition and pharmacologic augmentation of presynaptic inhibition on sympathetic heart rate control. *American Journal of Physiology Heart and Circulatory Physiology* Vol. 295, No.5: 1855–1866, 2008.
45) Toru Kawada, Toji Yamazaki, Tsuyoshi Akiyama, Hirotoshi Kitagawa, Shimizu Shuji, **Masaki Mizuno**, Meihua Li, Masaru Sugimachi. Vagal stimulation suppresses ischemia-induced myocardial interstitial myoglobin release. *Life Sciences* Vol. 83, No.13-14: 490–495, 2008.
46) Atsunori Kamiya, Toru Kawada, Kenta Yamamoto, **Masaki Mizuno**, Shuji Shimizu, and Masaru Sugimachi. Upright tilt resets dynamic transfer function of baroreflex neural arc to minify the pressure disturbance in total baroreflex control. *Journal of Physiological Sciences* Vol. 58, No.3: 189–198, 2008.
47) Toru Kawada, Toji Yamazaki, Tsuyoshi Akiyama, Toshiaki Shishido, Shuji Shimizu, **Masaki Mizuno**, Hidezo Mori, and Masaru Sugimachi. Regional difference in ischaemia-induced myocardial interstitial noradrenaline and acetylcholine releases. *Autonomic Neuroscience: Basic & Clinical*, Vol. 137, No.1-2: 44–50, 2007.
48) **Masaki Mizuno**, Atsunori Kamiya, Toru Kawada, Tadayoshi Miyamoto, Shuji Shimizu, and Masaru Sugimachi. Muscarinic potassium channels augment dynamic and static heart rate responses to vagal stimulation. *American Journal of Physiology Heart and Circulatory Physiology* Vol. 293, No.3: H1564–H1570, 2007.
49) **Masaki Mizuno**, Ken Tokizawa, and Isao Muraoka. Effects of regional cooling on vasoconstriction in the non-exercised limb during sustained knee extension exercise. *Sport Science Research* Vol. 4; 1–8, 2007.
50) Isao Muraoka, Hasunuma Tomoko, Uesato Kazuo, **Masaki Mizuno**, Kuniaki Fukushima, Kazuhiro Kosuge, Hajime, Iijima, Yuji, Kumagai. Effects of activity levels of daily life on serum creatine kinase activity. *Stress Science Research*, Vol. 22; 41–50, 2007. (in Japanese with English abstract)
51) Atsunori Kamiya, Toru Kawada, **Masaki Mizuno**, Tadayoshi Miyamoto, Kazunori Uemura, Kenjiro Seki, Shuji Shimizu, Masaru Sugimachi. Baroreflex increases correlation and coherence of muscle sympathetic nerve activity (SNA) with renal and cardiac SNAs. *Journal of Physiological Sciences* Vol. 56; No.5: 325–333, 2006.

52) Ken Tokizawa, **Masaki Mizuno**, and Isao Muraoka. Forearm vascular responses to combined muscle metaboreceptor activation in the upper and lower limbs. *Experimental Physiology* Vol. 91; No.4: 723–729, 2006.
53) Ken Tokizawa, **Masaki Mizuno**, Naoyuki Hayashi, and Isao Muraoka. Cardiovascular responses to extension and flexion exercises at arms and legs. *European Journal of Applied Physiology* Vol. 97; No.2: 249–252, 2006.
54) **Masaki Mizuno**, Ken Tokizawa, and Isao Muraoka. Heterogeneous oxygenation in nonexercising triceps surae muscle during contralateral static contraction. *European Journal of Applied Physiology* Vol. 97; No.2: 181–188, 2006.
55) **Masaki Mizuno**, Yuichi Kimura, Ken Tokizawa, Kenji Ishii, Keiichi Oda, Toru Sasaki, Yoshio Nakamura, Isao Muraoka, and Kiichi Ishiwata. Greater adenosine A2A receptor densities in cardiac and skeletal muscle in endurance trained men: a [11C]TMSX PET study. *Nuclear Medicine and Biology* Vol. 32; No.8: 831–836, 2005.
56) Yayoi Kawahara, **Masaki Mizuno**, Takashi Iwakawa, Yoshio Nakamura, and Isao Muraoka. Relationship between oxygen supply and consumption in exercised muscle during recovery. *Advances in Exercise and Sports Physiology* Vol. 11; No.2: 55–60, 2005.
57) Ken Tokizawa, **Masaki Mizuno**, Yoshio Nakamura, and Isao Muraoka. Passive triceps surae stretch inhibits vasoconstriction in the nonexercised limb during posthandgrip muscle ischemia. *Journal of Applied Physiology* Vol. 97; No.5: 1681–1685, 2004.
58) Kiichi Ishiwata, **Masaki Mizuno**, Yuichi Kimura, Kazunori Kawamura, Keiichi Oda, Toru, Sasaki, Yoshio Nakamura, Isao Muraoka, and Kenji Ishii. Potential of [11C]TMSX for evaluation of adenosine A2A receptors in the skeletal muscle by positron emission tomography. *Nuclear Medicine and Biology* Vol. 31: No. 7, 949–956, 2004.
59) **Masaki Mizuno**, Ken Tokizawa, Takashi Iwakawa, and Isao Muraoka. Inflection points of cardiovascular responses and oxygenation are correlated in the distal but not the proximal portions of muscle during incremental exercise. *Journal of Applied Physiology* Vol. 97: No.3, 867–873, 2004.
60) Ken Tokizawa, **Masaki Mizuno**, Yoshio Nakamura, and Isao Muraoka. Venous occlusion to the lower limb attenuates vasoconstriction in the non-exercised limb during post-handgrip muscle ischemia. *Journal of Applied Physiology* Vol. 96: No.3, 981–984, 2004.
61) **Masaki Mizuno**, Yuichi Kimura, Takashi Iwakawa, Keiichi Oda, Kenji Ishii, Kiichi Ishiwata, Yoshio Nakamura, and Isao Muraoka. Regional differences in blood volume and blood transit time in resting skeletal muscle. *Japanese Journal of Physiology*, Vol. 53: No. 6, 467–470, 2003.
62) **Masaki Mizuno**, Yuichi Kimura, Takashi Iwakawa, Keiichi Oda, Kenji Ishii, Kiichi Ishiwata, Yoshio Nakamura, and Isao Muraoka. Regional differences in blood flow and oxygen consumption in resting muscle and their relationship during recovery from exhaustive exercise. *Journal of Applied Physiology* Vol. 95: No.6, 2204–2210, 2003.
63) Ken Tokizawa, **Masaki Mizuno**, Yoshio Nakamura, and Isao Muraoka. Effects of exercise intensity and low-pressure occlusion in calf on cardiovascular responses during concomitant forearm and calf exercise. *Japan Journal of Physical Education Health and Sport Sciences*. Vol.48: No. 2, 225–235, 2003 (in Japanese with English abstract)
64) Yayoi Kawahara, **Masaki Mizuno**, Kazunobu Ohmori, Yoshio Nakamura, and Isao Muraoka. Muscle oxygenation kinetics after intensive bicycle exercise. *Japan Journal of Exercise and Sports Physiology*. Vol. 10: No.1, 9–16, 2003 (in Japanese with English abstract)

65) Kazunobu Ohmori, Shin-ya. Kuno, Yuichi Kimura, **Masaki Mizuno**, Yoshio Nakamura, Isao Muraoka, Fukio Ohta, Masahiro Mishina, Hinako Toyama, and Michio Senda. Assessment of regional change of glucose metabolism after high-intensity exercise inn exercised muscle using positron emission tomography. *Advances in Exercise and Sports Physiology*, Vol. 6, No.3 pp.81–84, 2000.

https://www.ncbi.nlm.nih.gov/sites/myncbi/1LWghwZFwCt57/bibliography/50398876/public/?sort=date&direction=decending

2. Non-refereed publications

N/A

3. Chapters in Books

1) Nan Liang, Gary A. Iwamoto, Ryan M. Downey, Jere H. Mitchell, Scott A. Smith and **Masaki Mizuno**. The pressor response to concurrent stimulation of the mesencephalic locomotor region and peripheral sensory afferents is attenuated in normotensive but not hypertensive rats. In: *Cardiovascular Adjustments and Adaptations to Exercise: From the Athlete to the Patient*. Frontiers Media SA. doi: 10.3389/978-2-88963-633-4, Crisafulli, A., Piepoli, M., Thijssen, D. H. J., Bassareo, P. P., eds., 2020.
2) **Masaki Mizuno** and Isao Muraoka. Evaluation of heterogeneities of skeletal muscle perfusion and metabolism and their physiological roles during exercise. In: *Exercise, Nutrition, and Environmental stress* Vol.4, Nose, H., M. Joyner, and K. Miki (eds) Traverse City: Cooper Publishing, pp 33–55, 2005.

4. Books

N/A

5. Other:

a. Published scientific reviews

1) Juan A. Estrada, Amane Hori, Ayumi Fukazawa, Rie Ishizawa, Norio Hotta, Han-Kyul Kim, Scott A. Smith, **Masaki Mizuno**. Abnormal cardiovascular control during exercise: role of insulin resistance in the brain. *Autonomic Neuroscience Basic and Clinical* *Accepted for publication*
2) Amane Hori, Ayumi Fukazawa, Kimiaki Katanosaka, **Masaki Mizuno**, Norio Hotta. Mechanosensitive channels in the mechanical component of the exercise pressor reflex. *Autonomic Neuroscience Basic and Clinical*, Vol. 250: 103128, 2023. doi.org/10.1016/j.autneu.2023.103128.
3) Amane Hori, Kimiaki Katanosaka**, Masaki Mizuno** and Norio Hotta. Mechanobiology of cardiovascular control during exercise (In Japanese, Mini-Review). *Annual report of Research Institute of Life and Health* Vol. 18, 42-48, 2021.
4) **Masaki Mizuno**, Norio Hotta, Rie Ishizawa, Han-Kyul Kim, Gary Iwamoto, Wanpen Vongpatanasin, Jere H. Mitchell and Scott A. Smith. The Impact of Insulin Resistance on Cardiovascular Control during Exercise in Diabetes. *Exercise and Sport Sciences Reviews* Vol. 49, No. 3: 157-167, 2021.

5) Han-Kyul Kim, **Masaki Mizuno** and Wanpen Vongpatanasin. Phosphate, the forgotten mineral in hypertension. *Current Opinion in Nephrology and Hypertension*. Vol. 28, Issue. 4: 345-351, 2019.
6) Rie Ishizawa and **Masaki Mizuno**. The risk of hypertension and blood pressure response during exercise (In Japanese, Invited Review). *Journal of Physical Education, Health and Recreation*. *Vol. 68, No. 9: 665-670, 2018.*
7) **Masaki Mizuno**, Jere H. Mitchell, and Scott A. Smith. Invited Review: The exercise pressor reflex in hypertension*. The Journal of Physical Fitness and Sports Medicine*. Vol. 5, No. 5: 339-347, 2016.
8) Scott A. Smith, Ryan M. Downey, Jon W. Williamson and **Masaki Mizuno**. Autonomic Dysfunction in Muscular Dystrophy: A Theoretical Framework for Muscle Reflex Involvement. *Frontiers in Physiology* Vol.5, No.47: 1-9, 2014.
9) Megan N. Murphy, **Masaki Mizuno**, Jere H. Mitchell, and Scott A. Smith. Cardiovascular Regulation by Skeletal Muscle Reflexes in Health and Disease. *American Journal of Physiology Heart and Circulatory Physiology* Vol.301, No.4: 1191–1204, 2011.
10) **Masaki Mizuno**. Visualization of skeletal muscle metabolism during exercise. *Training Science* Vol. 20, No. 2: 91–95, 2008 (in Japanese)

b. Selected Abstracts (<u>First Author or Senior Author only</u>)

1) Amane Hori, Toru Kawada, Norio Hotta, Ayumi Fukazawa, Juan A. Estrada, Han-Kyul Kim, Gary A. Iwamoto, Scott A. Smith, Wanpen Vongpatanasin, and **Masaki Mizuno**. Blockade of insulin receptor signaling in the brain impairs arterial baroreflex function in rats. *71th Annual Congress of the American College of Sports Medicine*, Boston, USA, May, 2024. *Medicine & Science in Sports & Exercise 56(10S):p 923-924, October 2024.*
2) Ayumi Fukazawa, Amane Hori, Juan Estrada, Han-Kyul Kim, Gary A. Iwamoto, Norio Hotta, Scott A. Smith, Wanpen Vongpatanasin, and **Masaki Mizuno**. Insulin enhances the activity of TRPV4 channels in rat small dorsal root ganglion neurons. *71th Annual Congress of the American College of Sports Medicine*, Boston, USA, May, 2024. *Medicine & Science in Sports & Exercise. 56(10S):860-861, October 2024.*
3) Han-Kyul Kim, Juan A. Estrada, Ayumi Fukazawa, Amane Hori, Gary A. Iwamoto, **Masaki Mizuno**, Scott A. Smith, and Wanpen Vongpatanasin. Exercise Pressor Reflex Function Is Exacerbated in Decerebrate Adenine-Induced Chronic Kidney Disease Rats. *2nd Annual Meeting American Physiological Summit*, Long Beach, USA, April, 2024. *Physiology 2024.39.S1.1722*
4) Juan Estrada, Han-Kyul Kim, Ayumi Fukazawa, Amane Hori, Rie Ishizawa, Norio Hotta, Gary A. Iwamoto, Scott A. Smith, Wanpen Vongpatanasin, and **Masaki Mizuno**. Disrupted phosphorylated phosphoinositide 3-kinase in the NTS of type 2 diabetic rats. *2nd Annual Meeting American Physiological Summit*, Long Beach, USA, April, 2024. *Physiology 2024.39.S1.2503*
5) Ayumi Fukazawa, Amane Hori, Juan Estrada, Han-Kyul Kim, Gary A. Iwamoto, Scott A. Smith, Wanpen Vongpatanasin, and **Masaki Mizuno**. Amyloid β reduces mechanical sensation through attenuating TRPV4 channels in rat small dorsal root ganglia neurons. *2nd*

Annual Meeting American Physiological Summit, Long Beach, USA, April, 2024. *Physiology 2024.39.S1.417*

6) Kenta Yamamoto, Riko Kai, **Masaki Mizuno**. Daily physical activity enhances efficacy of treatment with SGLT2 inhibitors in patients with type 2 diabetes. *28th Annual Congress of the European College of Sport Science,* Paris, France, July, 2023. *ECSS Proceeding*
7) Ayumi Fukazawa, Amane Hori, Norio Hotta, Kimiaki Katanosaka, Juan Estrada, Rie Ishizawa, Han-Kyul Kim, Gary A. Iwamoto, Scott A. Smith, Wanpen Vongpatanasin, and **Masaki Mizuno**. Antagonism of TRPV4 channels decreases neural discharge and pressor responses to mechanical stimulation in rats. *70th Annual Congress of the American College of Sports Medicine*, Denver, USA, May-June, 2023. *Medicine and Science in Sports Exercise. 55(9S):p 555, September 2023.*
8) Juan Estrada, Rie Ishizawa, Han-Kyul Kim, Norio Hotta, Ayumi Fukazawa, Gary A. Iwamoto, Scott A. Smith, Wanpen Vongpatanasin, and **Masaki Mizuno**. Speed of mechanical loading determines the cardiovascular and sympathetic responses to muscle mechanoreflex in rats. *70th Annual Congress of the American College of Sports Medicine*, Denver, USA, May-June, 2023. *Medicine and Science in Sports Exercise. 55(9S):328-329, 2023*
9) Ayumi Fukazawa, Amane Hori, Norio Hotta, Kimiaki Katanosaka, Juan Estrada, Rie Ishizawa, Han-Kyul Kim, Gary A. Iwamoto, Scott A. Smith, Wanpen Vongpatanasin, and **Masaki Mizuno**. Antagonism of TRPV4 channels decreases mechanically activated current in rat small dorsal root ganglion neurons. *1st Annual Meeting American Physiological Summit*, Long Beach, USA, April, 2023. *Physiology* Vo1. 38 (S1), 5716415
10) Juan Estrada, Rie Ishizawa, Han-Kyul Kim, Ayumi Fukazawa, Gary A. Iwamoto, Scott A Smith, Wanpen Vongpatanasin, and **Masaki Mizuno**. Intracerebroventricular injection of insulin normalizes the augmented exercise pressor reflex in type II diabetic rats. *1st Annual Meeting American Physiological Summit*, Long Beach, USA, April, 2023. *Physiology* Vol. 38 (S1), 5730330
11) Juan A. Estrada, Norio Hotta, Han-Kyul Kim, Rie Ishizawa, Ayumi Fukazawa, Gary A. Iwamoto, Scott A. Smith, Wanpen Vongpatanasin, and **Masaki Mizuno**. The exercise pressor reflex activates nuclear c-Fos translocation within insulin receptor positive neurons of the nucleus tractus solitarius in Sprague-Dawley rats. *1st Annual Meeting American Physiological Summit*, Long Beach, USA, April, 2023. *Physiology* Vol. 38 (S1), 5730413
12) Amane Hori, Teruaki Nasu, Ryuji Saito, Kimiaki Katanosaka, Kazue Mizumura, **Masaki Mizuno**, and Norio Hotta. The ASIC3 inhibitor APETx2 attenuates the exaggerated muscle mechanoreflex in rats with repeated cold stress. *100th Anniversary Annual Meeting of Physiological Society of Japan*, Kyoto, Japan, March, 2023. *Journal of Physiological Science 73 (Suppl. 1):117, 2023*
13) Rie Ishizawa, Norio Hotta, Han-Kyul Kim, Gary A. Iwamoto, Wanpen Vongpatanasin, Scott A. Smith and **Masaki Mizuno**. Alterations of Piezo-1 channel activity in group IV muscle afferents of Type 2 diabetic rats . *100th Anniversary Annual Meeting of*

Physiological Society of Japan, Kyoto, Japan, March, 2023. *Journal of Physiological Science 73 (Suppl. 1):114, 2023*

14) Juan A. Estrada, Norio Hotta, Gary A. Iwamoto, Han-Kyul Kim, Wanpen Vongpatanasin, Jere H. Mitchell, Scott A. Smith, **Masaki Mizuno**. Brain Insulin Receptor Antagonism Augments the Blood Pressure Response to Activation of the Exercise Pressor Reflex. *69th Annual Congress of the American College of Sports Medicine*, San Diego, USA, May-June, 2022. *Medicine and Science in Sports Exercise*. Vol. 54, 9S: 378-379, 2022.
15) **Masaki Mizuno**, Rie Ishizawa, Norio Hotta, Han-Kyul Kim, Gary A. Iwamoto, Wanpen Vongpatanasin, Scott A. Smith, Jere H. Mitchell. Frequency dependent neural discharge of group IV muscle afferents to sinusoidal mechanical stimulation in rats. *69th Annual Congress of the American College of Sports Medicine*, San Diego, USA, May-June, 2022. *Medicine and Science in Sports Exercise*. Vol. 54, 9S: 199, 2022.
16) Rie Ishizawa, Norio Hotta, Han-Kyul Kim, Gary A. Iwamoto, Wanpen Vongpatanasin, Scott A. Smith, Jere H. Mitchell, **Masaki Mizuno**. Yoda1-induced Piezo1 channel activity in group IV muscle afferents of type 2 diabetic rats. *69th Annual Congress of the American College of Sports Medicine*, San Diego, USA, May-June, 2022. *Medicine and Science in Sports Exercise*. Vol. 54, 9S: 379, 2022.
17) Ayumi Fukazawa, Amane Hori, Hotta Norio, Juan Estrada, Kimiaki Katanosaka, Kazue Mizumura, Jun Sato, Rie Ishizawa, Han-Kyul Kim, Gary A. Iwamoto, Wanpen Vongpatanasin1, Jere H. Mitchell, Scott A. Smith, and **Masaki Mizuno**. Intramuscular Insulin administration potentiates sympathetic and pressor the responses to capsaicin in normal healthy rats. *Experimental Biology 2022*, Philadelphia, USA, April, 2022. *FASEB Journal Vol. 35, S1, 2022.*
18) Han-Kyul Kim, Rie Ishizawa, Ayumi Fukazawa, Jere H. Mitchell, Scott A. Smith, **Masaki Mizuno**, and Wanpen Vongpatanasin. Dapagliflozin Reduces Elevated Blood Pressure and Skeletal Muscle Reflex Overactivation in Young Prehypertensive Spontaneously Hypertensive Rats. *Experimental Biology 2022*, Philadelphia, USA, April, 2022. *FASEB Journal Vol. 35, S1, 2022.*
19) Amane Hori, Teruaki Nasu, Ryuji Saito, Kimiaki Katanosaka, Kazue Mizumura, **Masaki Mizuno**, Norio HottaExposure to Repeated Cold Stress on Potentiates Sympathetic and Cardiovascular Responses to activation of Skeletal Muscle Mechanoreflex in Decerebrated Rats. *Experimental Biology 2022*, Philadelphia, USA, April, 2022. *FASEB Journal Vol. 35, S1, 2022.*
20) Rie Ishizawa, Norio Hotta, Han-Kyul Kim, Gary A. Iwamoto, Jere H. Mitchell, Scott A. Smith, Wanpen Vongpatanasin, **Masaki Mizuno**. High-glucose exposure potentiates the response to capsaicin-induced TRPV1 activation in group IV muscle afferents. *68th Annual Congress of the American College of Sports Medicine*, Virtual, USA, June, 2021. *Medicine and Science in Sports Exercise*. Vol. 53, 8S: 285, 2021.
21) Han-Kyul Kim, **Masaki Mizuno**, Jere H. Mitchell, Johanne V. Pastor, Orson W. Moe, Scott A. Smith, Beverly A. Rothermel, and Wanpen Vongpatanasin. Central Calcineurin Plays a

Role in Skeletal Muscle Reflex Overactivity Induced by High Dietary Phosphate Intake in Rats. *Experimental Biology 2021*, Virtual, USA, April, 2021. *FASEB Journal Vol. 35, S1, 2021.*

22) Kanji Matsukawa, Gary A. Iwamoto, Jere H. Mitchell, **Masaki Mizuno**, Han-Kyul Kim, Jon W. Williamson, and Scott A. Smith. Exaggerated pressor and sympathetic nerve responses during spontaneously-occurring motor activity in decerebrate spontaneously hypertensive rats. *Experimental Biology 2021*, Virtual, USA, April, 2021. *FASEB Journal Vol. 35, S1, 2021.*
23) Rie Ishizawa, Norio Hotta, Han-Kyul Kim, Gary A. Iwamoto, Jere H. Mitchell, Scott A. Smith, Wanpen Vongpatanasin, **Masaki Mizuno**. Role of Piezo channels in group IV muscle afferent fiber mechanosensation in rats. *Experimental Biology 2021*, Virtual, USA, April, 2021. *FASEB Journal Vol. 35, S1, 2021.*
24) Rie Ishizawa, Han-Kyul Kim, Norio Hotta, Gary A. Iwamoto, Wanpen Vongpatanasin, Jere H. Mitchell, Scott A. Smith, and **Masaki Mizuno**. Sensory Neuron Sensitization By Pkc-induced Trpv1 Phosphorylation in Type 2 Diabetic Rats. *67th Annual Congress of the American College of Sports Medicine*, San Francisco, USA, May-June, 2020. *Medicine and Science in Sports Exercise. Vol. 52, 7S: 227, 2020.*
25) Han-Kyul Kim, Rie Ishizawa, Norio Hotta, Gary A. Iwamoto, Wanpen Vongpatanasin, Jere H. Mitchell, Scott A. Smith, and **Masaki Mizuno**. Skeletal Muscle Reflex-Induced Dysregulation of Sympathetic Nerve Activity in Type 1 Diabetic Rats. *Experimental Biology 2020*, San Diego, USA, April, 2020. *FASEB Journal Vol. 34, S1, 2020.*
26) Rie Ishizawa, Han-Kyul Kim, Norio Hotta, Gary A. Iwamoto, Wanpen Vongpatanasin, Jere H. Mitchell, Scott A. Smith, and **Masaki Mizuno**. Sensitization of group lV skeletal muscle afferents in type 1 diabetic rats. *Experimental Biology 2020*, San Diego, USA, April, 2020. *FASEB Journal Vol. 34, S1, 2020.*
27) Norio Hotta, Amane Hori, Yukiko Okamura, Reizo Baba, Hidehiro Watanabe, Jun Sugawara, Han-Kyul Kim, Rie Ishizawa, Gary A. Iwamoto, Wanpen Vongpatanasin, Jere H. Mitchell, Scott A. Smith, and **Masaki Mizuno**. Insulin resistance is an independent factor to determine an exaggerated pressor response to ischemic rhythmic handgrip in non–diabetic older adults. *Experimental Biology 2020*, San Diego, USA, April, 2020. *FASEB Journal Vol. 34, S1, 2020.*
28) Rie Ishizawa, Han-Kyul Kim, Norio Hotta, Gary A. Iwamoto, Wanpen Vongpatanasin, Jere H. Mitchell, Scott A. Smith, and **Masaki Mizuno**. An exaggerated muscle metaboreflex in diabetic rats is mediated by potentiated skeletal muscle afferent responsiveness. *66th Annual Congress of the American College of Sports Medicine*, Orlando USA, May-June, 2019. *Medicine and Science in Sports Exercise. Vol. 51, No. 6: 494, 2019.*
29) Norio Hotta, Kimiaki Katanosaka, Kazue Mizumura, Rie Ishizawa, Jere H. Mitchell, Scott A. Smith, and **Masaki Mizuno**. Responses to Mechanical and Chemical Stimuli are Augmented by Insulin Administration in Neurons Innervating Skeletal Muscle.

Experimental Biology 2019, Orlando, USA, April, 2019. *FASEB Journal Vol. 33, No. 1, 540.1, 2019.*

30) Rie Ishizawa, Han-Kyul Kim, Norio Hotta, Gary A. Iwamoto, Wanpen Vongpatanasin, Jere H. Mitchell, Scott A. Smith, and **Masaki Mizuno**. An Exaggerated Muscle Mechanoreflex in Type 2 Diabetic Rats Is Mediated by Potentiated Skeletal Muscle Afferent Discharge to Mechanical Stimulation. *Experimental Biology 2019*, Orlando, USA, April, 2019. Featured Topic - Regulation of Muscle Sympathetic Outflow during Exercise. *FASEB Journal Vol. 33, No. 1, 860.1, 2019.*
31) Rie Ishizawa, Norio Hotta, Gary A. Iwamoto, Han-Kyul Kim, Wanpen Vongpatanasin, Jere H. Mitchell, Scott A. Smith and **Masaki Mizuno**. Enhanced muscle afferent responses to mechanical/chemical stimuli in type 2 diabetic rats in vitro. *9th FAOPS*, Kobe, JAPAN March, 2019. *Journal of Physiological Sciences* Volume 69, Supplement 1, pp 1–314, 2019.
32) Norio Hotta, Kimiaki Katanosaka, Kazue Mizumura, Jere H. Mitchell, Scott A. Smith and **Masaki Mizuno**. Insulin Potentiates Neuronal Responses to Chemical Stimulation in Thin Muscle Afferents and Dorsal Root Ganglia. 65th Annual Congress of the American College of Sports Medicine, Minneapolis USA, May-June, 2018. *Medicine and Science in Sports Exercise. Vol. 50, No. 5: 536, 2018.*
33) Norio Hotta, Kimiaki Katanosaka, Kazue Mizumura, Jere H. Mitchell, Scott A. Smith and **Masaki Mizuno**. Neural Responses to Mechanical Stimulation in Thin Muscle Afferents and Dorsal Root Ganglia are Sensitized by Insulin. Experimental Biology 2018, San Diego, USA, April, 2018. Featured Topic - Battle of the Reflexes: Chemo- versus Baroreflexes during Physiological Stressors, Aging and Cardiovascular Disease. *FASEB Journal Vol. 32, No. 1, 884.1, 2018.*
34) Masaki Mizuno, Jere H. Mitchell, and Scott A. Smith. Exaggerated Cardiovascular Response to Muscle Mechanoreflex Activation in Type 2 Diabetic Rats. 64th Annual Congress of the American College of Sports Medicine, Denver, USA, May-June, 2017. *Medicine and Science in Sports Exercise. Vol. 49, No. 5: 66-67, 2017.*
35) **Masaki Mizuno**, Jere H. Mitchell, and Scott A. Smith. Exaggerated sympathetic and pressor responses to exercise pressor reflex activation are attenuated by intracerebroventricular insulin administration in type 2 diabetic rats. Experimental Biology 2017, Chicago, USA, April, 2017. *FASEB Journal Vol. 31, No. 1, 712.3, 2017.*
36) **Masaki Mizuno**, Scott Crawford, Samuel Rosengarden, Jere H. Mitchell, Scott A. Smith and Wanpen Vongpatanasin. Excess phosphorus intake potentiates the skeletal muscle mechanoreflex and metaboreflex in rats. 63th Annual Congress of the American College of Sports Medicine, Boston, USA, May-June, 2016. *Medicine and Science in Sports Exercise. Vol. 48, No. 5: 201, 2016.*
37) **Masaki Mizuno**, Seth H. Holwerda, Jere H. Mitchell, Scott A. Smith and Paul J. Fadel. Enhanced skeletal muscle metaboreflex activation in type 2 diabetes. Experimental Biology 2016, San Diego, USA, April, 2016. *The FASEB Journal Vol. 30, No. 1, 1004.3, 2016.*

38) **Masaki Mizuno**, Scott Crawford, Cooper Carnahan, Jere H. Mitchell, Scott A. Smith, Wanpen Vongpatanasin. High inorganic phosphate diet augments the sympathetic response to exercise pressor reflex activation in rats. Experimental Biology 2016, San Diego, USA, April, 2016. *The FASEB Journal Vol. 30, No. 1, 1006.1, 2016.*
39) **Masaki Mizuno**, Gary A. Iwamoto, Wanpen Vongpatanasin, Jere H. Mitchell, and Scott A. Smith. Exercise training ameliorates sympathetic overactivity in response to muscle metaboreflex stimulation in spontaneously hypertensive rats. 62th Annual Congress of the American College of Sports Medicine, San Diego, USA, May, 2015. *Medicine and Science in Sports Exercise. Vol. 47, No. 5: 739-740, 2015.*
40) **Masaki Mizuno**, Gary A. Iwamoto, Wanpen Vongpatanasin, Jere H. Mitchell, and Scott A. Smith. Voluntary exercise training attenuates the enhanced sympathetic responses to muscle mechanoreflex activation in spontaneously hypertensive rats. Experimental Biology 2015, Boston, USA, March, 2015. *The FASEB Journal Vol. 29, No. 1, 1055.8, 2015.*
41) **Masaki Mizuno**, Gary A. Iwamoto, Wanpen Vongpatanasin, Jere H. Mitchell, and Scott A. Smith. Impaired functional sympatholysis in spontaneously hypertensive rats is normalized by exercise training via a nitric oxide mechanism. 61th Annual Congress of the American College of Sports Medicine, Orland, USA, May, 2014. *Medicine and Science in Sports Exercise. Vol. 46, No. 5: 321-336, 2014.*
42) **Masaki Mizuno**, Ryan M. Downey, Jere H. Mitchell, Scott A. Smith, and Wanpen Vongpatanasin. High salt intake and aldosterone independently augment the exercise pressor reflex in rats. Experimental Biology 2014, San Diego, USA, April, 2014. *The FASEB Journal Vol. 28, No. 1, 1165.10, 2014.*
43) **Masaki Mizuno**, Ryan Downey, Jere H. Mitchell, and Scott A. Smith. Alterations in the Cardiovascular Response to Central Command and Exercise Pressor Reflex Activation in Type 2 Diabetic Rats. 60th Annual Congress of the American College of Sports Medicine, Indianapolis, USA, May, 2013. *Medicine and Science in Sports Exercise. Vol. 45, No. 5: 188-190, 2013.*
44) **Masaki Mizuno**, German Lozano, Khurrum Siddique, Michel Baum, and Scott A. Smith. Enalapril attenuates the exaggerated sympathetic response to physical stress in prenatally programmed hypertensive rats. Experimental Biology 2013, Boston, USA, April, 2013. *The FASEB Journal Vol. 27, No. 1, 943.10, 2013.*
45) **Masaki Mizuno**, Khurrum Siddique, Michel Baum, Scott A. Smith. Prenatal Programming of Hypertension by Dietary Protein Deprivation Alters Skeletal Muscle Reflex Function in Rats. 59th Annual Congress of the American College of Sports Medicine, San Francisco, USA, June, 2012. *Medicine and Science in Sports Exercise. Vol. 44, No. 5: 267-958, 2012.*
46) **Masaki Mizuno**, Ryan Downey, Jere H. Mitchell, and Scott A. Smith. Brain insulin modulates the cardiovascular response to central command and exercise pressor reflex stimulation in rats. Experimental Biology 2012, San Diego, USA, April, 2012. *The FASEB Journal Vol. 26 No. 1, 1091.12, 2012.*

47) **Masaki Mizuno**, Megan N. Murphy, Jere H. Mitchell, and Scott A. Smith. Exaggerated Sympathetic Responses to Metaboreflex Activation during Ischemic Muscle Contraction in Hypertensive Rats. 58th Annual Congress of the American College of Sports Medicine, Denver, USA, June, 2011. *Medicine and Science in Sports Exercise. Vol. 43, No. 5: 459, 2011.*
48) **Masaki Mizuno**, Megan N. Murphy, Jere H. Mitchell, and Scott A. Smith. Skeletal muscle metaboreflex overactivity is mediated by the TRPv1 receptor in spontaneously hypertensive rats. Experimental Biology 2011, Washington, USA, April, 2011. *The FASEB Journal Vol. 25, No. 1, 640.1, 2011.*
49) **Masaki Mizuno**, Megan N. Murphy, Jere H. Mitchell, and Scott A. Smith. Sympathetic Nerve Responses to Activation of Chemically-Sensitive Skeletal Muscle Afferent Fibers in Hypertensive Rats. 57th Annual Congress of the American College of Sports Medicine, Baltimore, USA, June, 2010. *Medicine and Science in Sports Exercise. Vol. 42, No. 5: 328, 2010.*
50) **Masaki Mizuno**, Megan N. Murphy, Jere H. Mitchell, and Scott A. Smith. The sympathetic response to activation of the skeletal muscle mechanoreflex is enhanced in spontaneously hypertensive rats. Experimental Biology 2010, Anaheim, USA, April, 2010. *The FASEB Journal Vol. 24, No. 1, 619.5, 2010.*
51) **Masaki Mizuno**, Atsunori Kamiya, Toru Kawada, Masaru Sugimachi. Muscarinic potassium channels play a significant role in the negative chronotropic response with or without background sympathetic tone. Experimental Biology 2008, San Diego, USA, April, 2008. *The FASEB Journal Vol. 22, No. 1, 970.2, 2008.*
52) **Masaki Mizuno**, Yuichi Kimura, Kenji Ishii, Keiichi Oda, Toru Sasaki, Kazunori Kawamura, Kiichi Ishiwata, Isao Muraoka. Effects of endurance training on adenosine A2A receptor density in myocardium and skeletal muscle. 51st Annual Congress of the American College of Sports Medicine, Indianapolis, USA, June, 2004. *Medicine and Science in Sports Exercise. Vol. 36, No. 5: S26, 2004.*

c. Editorials, position papers, background papers

N/A

d. Original invited lectures and presentations published for distribution

1) **Masaki Mizuno**. Be Ambitious With Your Career Goals. Special lecture, Graduate School of Life and Health Sciences, Chubu University, Kasugai, Japan, November 2024.
2) **Masaki Mizuno**. Be Ambitious With Your Career Goals. Special lecture, Graduate School of Physical Education, National Institute of Fitness and Sports in Kanoya, Kagoshima, Japan, November 2024.

3) **Masaki Mizuno**. Research Mindset, SHEEP seminar, School of Physical Education, National Institute of Fitness and Sports in Kanoya, Kagoshima, Japan, November 2024.
4) **Masaki Mizuno**. Open up career paths for young scientists and graduate students through a variety of experiences. Symposium (organizer), 32nd Congress of Japan Society of Exercise and Sports Physiology, Kanazawa, Japan, August 2024.
5) **Masaki Mizuno**. Frontiers of autonomic cardiovascular control during exercise. Symposium (organizer and speaker), 32nd Congress of Japan Society of Exercise and Sports Physiology, Kanazawa, Japan, August 2024.
6) **Masaki Mizuno**. An integrative approach to better understand the mechanisms of the exercise pressor reflex in health and disease. Symposium (speaker), 13th Congress of The International Society for Autonomic Neuroscience, Birmingham, UK, July 2024.
7) **Masaki Mizuno**. Exercise pressor reflex in vivo humans and animals studies. Symposium, Annual Meeting of Japanese Society of Physical Fitness and Sports Medicine, Tokyo, September 2023.
8) **Masaki Mizuno**. Amyloid beta and blood pressure regulation. Seminar, Research Institute for Life and Health Sciences at Chubu University, Kasugai, Japan, September 2023.
9) **Masaki Mizuno**. Impact of cardiovascular disease on sensory afferent function during physical exercise. Symposium, 100th Anniversary Meeting of Physiological Society of Japan, Kyoto, Japan March 2023. *Journal of Physiological Science 73 (Suppl. 1):70, 2023*
10) **Masaki Mizuno.** Insulin resistance and muscle sensory neuropathy. Seminar, Research Institute for Life and Health Sciences at Chubu University, Virtual, September 2021.
11) **Masaki Mizuno**. Insulin resistance and autonomic dysfunction in diabetes. Seminar in Faculty of Pharmaceutical Sciences, Teikyo Heisei University, Tokyo, Japan, September 2019.
12) **Masaki Mizuno**. Panel Discussion -Research abroad-. 74th Japanese Society of Physical Fitness and Sports Medicine, Tsukuba International Conference Center, Ibaraki, Japan, September 2019.
13) **Masaki Mizuno**. Cardiovascular regulation in diabetes -role of insulin-. 33rd Annual Respiratory Meeting, Tsukuba International Conference Center, Ibaraki, Japan, September 2019.
14) **Masaki Mizuno**. Blood pressure control and lifestyle disease -exercise pressor reflex-. University of Tsukuba/The National Institute of Advanced Industrial Science and Technology Joint Seminar, University of Tsukuba, Ibaraki, Japan, September 2019**.**
15) **Masaki Mizuno**. Research abroad and research career path in US. Graduate School Research Seminar, The University of Tokyo, Tokyo, Japan, April 2019.
16) **Masaki Mizuno**. Targeting insulin resistance to ameliorate abnormal cardiovascular control in diabetes. Research Seminar, Kobe University, Kobe, Japan, March 2019.
17) **Masaki Mizuno**. Targeting insulin resistance to improve abnormal cardiovascular control in diabetes. Faculty Development Seminar, Hiroshima University, Hiroshima, Japan, March 2019.

18) **Masaki Mizuno**. Targeting insulin resistance to improve exaggerated circulatory control in diabetes. Graduate School Seminar, Nagoya University, Nagoya, Japan, March 2019.
19) **Masaki Mizuno** and Hoda Yeganehjoo. Targeting insulin resistance to improve abnormal cardiovascular control in diabetes. Capra Interdisciplinary Healthcare Symposium "Collaborate: Using Team Approaches to Advance Research on Chronic Conditions", Dallas, USA, February 2019.
20) **Masaki Mizuno**. Dysfunctional neural control of circulation during physical activity in hypertension. Graduate School Seminar, Juntendo University, Inzai, Japan, July 2014.
21) **Masaki Mizuno**. Abnormal neural regulation of circulation during physical activity in hypertension. Graduate School Seminar, Toyo University, Tsurugashima, Japan, July 2014.
22) **Masaki Mizuno**. Neural control of circulation during physical exercise and its dysfunction in hypertension. Graduate School Seminar, The University of Tokyo, Tokyo, Japan, July 2014.
23) **Masaki Mizuno**. Dysfunctional autonomic regulation of circulatory system during exercise in hypertension. 137th Sports Sciences Meeting, Waseda University, Tokorozawa, Japan, July 2014.
24) **Masaki Mizuno**. The mechanisms for abnormal neural control of circulation during exercise in hypertension. Research Seminar, Japan Women's College of Physical Education, Tokyo, Japan, July 2014.
25) **Masaki Mizuno**. Abnormal neural control of circulation during exercise in hypertension. Research Seminar, Hiroshima University, Hiroshima, Japan, July 2014.
26) **Masaki Mizuno**. Neural control of circulation during exercise in hypertension. Graduate School Seminar, Nagoya University, Nagoya, Japan, June,2014.
27) **Masaki Mizuno**. Autonomic heart rate control using systems analysis. 48th Sports Sciences Meeting, Waseda University, Tokorozawa, Japan, July 2007.
28) **Masaki Mizuno**. Evaluation of changes in peripheral circulation during exercise using PET and NIRS. Symposium: Bioimaging in physical fitness and sports medicine, 61th Japanese Society of Physical Fitness and Sports Medicine, Kobe, Japan, September 2006.
29) **Masaki Mizuno** and Isao Muraoka. Evaluation of heterogeneities in skeletal muscle perfusion and metabolism and their physiological roles during exercise. International Sports Science Network Forum in Nagano, Matsumoto, Japan, November 2004.

VIII. TEACHING ACTIVITIES

1. Course participation:
a. Within department
1) ACR 5091, Independent Research -Course director (Fall, 2022-present), Department of Applied Clinical Research, University of Texas Southwestern Medical Center
2) ACR 5108, Doctoral Seminar II (Fall, 2020-present), Department of Applied Clinical Research, University of Texas Southwestern Medical Center

3) ACR 5107, Doctoral Seminar I (Fall, 2020-present), Department of Applied Clinical Research, University of Texas Southwestern Medical Center

b. Intradepartmental/School/University

1) HCS 5407, SSHP Human Physiology Block III (Gastrointestinal Physiology) (Summer 2015-present), School of Health Professions, University of Texas Southwestern Medical Center

c. Other teaching, activities

Weinberger Laboratory Cardiovascular Physiology Journal Club

1) Director, 2016-2019
2) Member, 2009-2022

Supervision and direction of postdoctoral fellow

1) Amane Hori (Ph.D, UT Southwestern Medical Center, 2023-present)
2) Ayumi Fukazawa (Ph.D, UT Southwestern Medical Center, 2022-present)
3) Juan A. Estrada (Ph.D, UT Southwestern Medical Center, 2020-2022)
4) Rie Ishizawa (Ph.D, UT Southwestern Medical Center, 2018-2021)
5) Han-Kyul Kim (Ph.D, UT Southwestern Medical Center, 2017-2021)

Supervision and direction of visiting researcher

1) Norio Hotta (Ph.D, Chubu University, 2019)
2) Zeljka Minic (Ph.D, University of Detroit Mercy, 2016)
3) Nan Liang (Ph.D, University of Hiroshima, 2011-2012)
4) Qinglu Li (Ph.D, University of Minnesota, 2010)

Applied Clinical Research Ph.D. Dissertation Committee

1) Caitlin Jarrard (Ph.D Student, UT Southwestern Medical Center, Spring 2024, Member)
2) Sepeadeh Radpour (Ph.D Student, UT Southwestern Medical Center, Summer 2023-2024, Chair)
3) Victoria Gonzalez (Ph.D Student, UT Southwestern Medical Center, Summer 2023-2025, Chair)
4) Patricia Champagne (Ph.D Student, UT Southwestern Medical Center, Summer 2022-2023, Member)

Applied Clinical Research Ph.D. Qualifying Exam Committee

1) Yosanly Cornelio (Ph.D Student, UT Southwestern Medical Center, Summer 2024, Chair)
2) Andrew Nasr (Ph.D Student, UT Southwestern Medical Center, Summer 2023, Chair)
3) Sepeadeh Radpour (Ph.D Student, UT Southwestern Medical Center, Summer 2023, Member)
4) John Giacona (Ph.D Student, UT Southwestern Medical Center, Summer 2022, Chair)
5) Victor Blais (Ph.D Student, UT Southwestern Medical Center, Summer 2020, Member)

Applied Clinical Research Ph.D. Program student mentoring/advising

1) Michell King (Ph.D Student, UT Southwestern Medical Center, 2024-present)
2) Victoria Gonzalez (Ph.D Student, UT Southwestern Medical Center, 2022-present)
3) Patricia Champagne (Ph.D Student, UT Southwestern Medical Center, 2021-2024)
4) Victor Blais (Ph.D Student, UT Southwestern Medical Center, 2019-2024)

5) Novelle Kew (Ph.D Student, UT Southwestern Medical Center, 2019)

Ph.D Student mentoring/advising
1) Amane Hori, (Ph.D Student, Chubu University, 2022-2023)
2) Ayumi Fukazawa (Ph.D Student, University of Tokyo, 2020-2022)
3) Aswini Kanneganti (Ph.D Student, UT Dallas, 2015)

Southwestern School of Health Professions Student mentoring/advising
1) Yoko Fujikawa (Clinical Nutrition Student, UT Southwestern Medical Center, 2019-2020)

Summer Intern Undergraduate Student mentoring/advising
1) Blaine Williamson (Summer Intern, UT Southwestern Medical Center, 2019)
2) Sarah Massey (Summer Intern, UT Southwestern Medical Center, 2019)
3) Scott Crawford (Summer Intern, UT Southwestern Medical Center, 2015)
4) Samuel Rosengarden (Summer Intern, UT Southwestern Medical Center, 2015)
5) Brandon Cherry (Summer Intern, UT Southwestern Medical Center, 2009)

IX. PROFESSIONAL SERVICE

1. Clinical Activities
   N/A
2. Service to professional societies
   N/A
3. Editorial services

1) Associate Editor, Frontiers in Physiology (2022-present)
2) Associate Editor, BMC Cardiovascular Disorders (2016-present)
3) Review Editor, Frontiers in Physiology (2011-2022)
4) Guest reviewers:
   Acta Physiologica, Advances in Medical Sciences, Aging, American Journal of Hypertension, American Journal of Physiology Heart and Circulatory Physiology, American Journal of Physiology Renal Physiology, American Journal of Physiology Regulatory, Integrative and Comparative Physiology, Annals of Clinical and Experimental Hypertension, Annals of Translational Medicine, Brain Stimulation, Applied Physiology, Nutrition, and Metabolism, Archives of Biochemistry and Biophysics, Autonomic Neurosciences: Basic and Clinical, Behavioural Brain Research, Brain Stimulation, Canadian Journal of Physiology and Pharmacology, Hypertension, Cardiovascular Research, Circulation, Computational and Structural Biotechnology Journal, Circulation Research, European Journal of Pharmacology, Experimental Physiology, Exercise and Sport Sciences Reviews, Frontiers in Physiology, Hypertension, Hypertension Research, IEEE Transactions on Biomedical Engineering, International Journal of Hypertension, International Journal of Sport and Health Science, JCI Insight, Journal of American College of Cardiology, Journal of Applied Physiology, Journal of Clinical & Experimental Cardiology, Journal of Molecular and Cellular Cardiology, Journal of Modern Physiological Research, Journal of Neurophysiology, Journal of Physiology, Journal of Physiological Sciences, Journal of Thermal Biology, Life Sciences, Medicine & Science in Sports & Exercise, Neuroscience Letters, Neuroscience, Physiological

Reports, Physiology International, PLOS ONE, Scandinavian Journal of Medicine and Science in Sports, Scientific Reports (165 service from 48 journals)

4. Invited and special lectures of clinical and service relevance

Planning, Coordinating and Organizing Seminar

1) Marc Kaufman, PhD, Professor, College of Medicine, Pennsylvania State University (2019)
2) Kanji Matsukawa, PhD, Professor, Hiroshima University (2019)
3) Norio Hotta, PhD, Associate Professor, Chubu University (2018)

5. Consultantships

N/A

6. Professional service to the community

Service to School of Health Professions
1) Faculty Promotion & Tenure Committee
   -Member(2022-present)
2) Faculty Post-Tenure Review Committee
   -Member(2022-present)
3) Research Advisory Committee
   -Member (2016-present)
   -Grant review sub-committee
   -Member (2019-present)
4) Faculty Assembly Executive Council
   -Member at large (2016-2019)

Service to Department of Applied Clinical Research
1) Summer Research Internship Program Committee
   -Member (2024-present)
2) Public Relation Committee
   -Member (2023-present)
3) Graduate Studies Committee
   -Member (2019-present)
4) Admissions Committee
   -Member (2019-present)
5) Curriculum Committee
   -Member (2019-present)

7. Other
N/A

X. ADMINISTRATION [College and University Service]

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1. Budget responsibilities
N/A

2. Personnel management responsibilities
N/A
3. Facilities responsibilities
N/A
4. Other
N/A

XI. MEMBERSHIPS, HONORS, AWARDS and SPECIAL RECOGNITION

1. Scholarly, Professional and Scientific Memberships
1) American Heart Association (2015~)
2) American College of Sports Medicine (2009~), Fellow (2023~)
3) American Physiological Society (2007~)

2. Awards, Honors, Special Recognition
1) Gilberto Moralez Jr Outstanding Mentor Award, University of Texas Southwestern School of Health Professions (2024)
2) Established Investigator Award, University of Texas Southwestern School of Health Professions (2022)
3) 2021 Star Reviewers, AJP-Regulatory, Integrative and Comparative Physiology, American Physiological Society (2022)
4) Outstanding Junior Faculty Award, University of Texas Southwestern School of Health Professions (2019)
5) New Investigator Award, University of Texas Southwestern School of Health Professions (2016)
6) Excellent Young Researchers Overseas Visit Program, Japan Society for the Promotion of Science (2010)
7) Research Fellowships for Young Scientists, Japan Society for the Promotion of Science (2009)
8) Fellowships for Research Abroad, The Nakatomi Foundation (2009)
9) Fellowship for Research Abroad, The Naito Foundation (2009)
10) Incentive Award, 8th Neurocardiology Workshop (2007)
11) Young Investigator Award (1st Prize), 59th Japan Society of Physical Fitness and Sports Medicine (2004)

XII. PROFESSIONAL GROWTH AND DEVELOPMENT

1) Participant in cardiovascular journal club hosted by Weinberger Laboratory
2) Attended Cardiology Grand Rounds Lectures
3) Attended SSHP Lecture Series and Capra Research Symposium
4) Attended Clinical Translational Research Forum hosted by University of Texas at Arlington
5) Established research collaborations with faculty in:

Extramural

- Department of Sports and Life Science, National Institute of Fitness and Sports in Kanoya, Rie Ishizawa, Ph.D.
- Department of Kinesiology and Health Education, UT at Austin, Audrey Stone, Ph.D.
- Faculty of Pharmaceutical Sciences, Teikyo Heisei University- Kenta Yamamoto, Ph.D.
- Department of Exercise Science and Physiology, Prefectural University of Hiroshima- Hideaki Kashima, Ph.D.
- Department of Kinesiology, Kansas State University- Steven Copp, Ph.D.
- Department of Cellular and Integrative Physiology, University of Nebraska Medical Center- Hanjun Wang, M.D.
- College of Life and Health Sciences, Chubu University- Norio Hotta, Ph.D.

Intramural

- Department of Applied Clinical Research- Scott Smith, Ph.D.
- Department of Physical Therapy- Staci Shearin, DPT, Ph.D.
- Department of Clinical Nutrition- Hoda Yeganehjoo, RD, Ph.D.
- Department of Cell Biology- Gary Iwamoto, Ph.D.
- Department of Internal Medicine, Hypertension Section- Wanpen Vongpatanasin, M.D.
- Department of Pediatric Nephrology- Matthias Wolf, M.D.

XIII. OTHER

N/A