



ARIHHP SCHOLARLY ACTIVITIES 2017

- ◆ Research Articles: 100
- ◆ Book Chapters: 8
- ◆ Distinctions/Awards: 9

A. Department of **Mind**

Research Articles

Suwabe K, Hyodo K, Byun K, Ochi G, Fukuie T, Shimizu T, Kato M, Yassa MA, Soya H. Aerobic fitness associates with mnemonic discrimination as a mediator of physical activity effects: evidence for memory flexibility in young adults. *Scientific Reports*, 7(1): 5140, 2017.

Jang Y, Koo JH, Kwon I, Kang EB, Um HS, Soya H, Lee Y, Cho JY. Neuroprotective effects of endurance exercise against neuroinflammation in MPTP-induced Parkinson's disease mice. *Brain Res*, 1655: 186-193, 2017.

Suwabe K, Hyodo K, Byun K, Ochi G, Yassa MA, Soya H. Acute moderate exercise improves mnemonic discrimination in young adults. *Hippocampus*. 27(3): 229-234, 2017.

Fernandez AM, Hernandez-Garzón E, Perez-Domper P, Perez-Alvarez A, Mederos S, Matsui T, Santi A, Trueba-Saiz A, García-Guerra L, Pose-Utrilla J, Fielitz J, Olson EN, Fernandez de la Rosa R, Garcia Garcia L, Pozo MA, Iglesias T, Araque A, Soya H, Perea G, Martin ED, Torres Aleman I. Insulin regulates astrocytic glucose handling through cooperation with Insulin-Like Growth Factor I. *Diabetes*, 66(1): 64-74, 2017.

Matsui T, Omuro H, Liu YF, Soya M, Shima T, McEwen BS, Soya H. Astrocytic glycogen-derived lactate fuels the brain during exhaustive exercise to maintain endurance capacity. *Proceedings of the National Academy of Sciences of the United States of America*, 114(24): 6358-6363, 2017.

Reagh ZM, Yassa MA. Selective vulnerabilities and biomarkers in neurocognitive aging. *F1000Research*, 6: 491, 2017.

Stark SM, Reagh ZM, Yassa MA, Stark CEL. What's in a context? Cautions, limitations, and potential paths forward. *Neurosci Lett*, 27; 680: 77-87, 2017.

Leal SL, Noche JA, Murray EA, Yassa MA. Age-related individual variability in memory performance is associated with amygdala-hippocampal circuit function and emotional pattern separation. *Neurobiology of Aging*, 49: 9-19, 2017.

Reagh ZM, Murray EA, Yassa MA. Repetition reveals ups and downs of hippocampal, thalamic, and neocortical engagement during mnemonic decisions. *Hippocampus*, 27: 169-183, 2017.

Leal SL, Noche JA, Murray EA, Yassa MA. High-resolution fMRI of amygdala and hippocampal subfields in older adults with depressive symptoms. *Hippocampus*, 27(4): 464-476, 2017.

Zheng J, Anderson KL, Riley JD, Leal SL, Shestyuk A, Gulsen G, Vadera S, Yassa MA, Knight RT, Lin JJ. Basolateral amygdala and hippocampal dynamics during processing of fearful faces. *Nature Communications*, 8: 14413, 2017.

Snigdha S, Yassa MA, Rivera C, Milgram NW, Cotman CW. Pattern separation and goal directed behavior in the aged canine. *Learning and Memory*, 24(3): 123-131, 2017.

+10 articles

Books

3 books

Distinctions/Awards

Oomura K, Shima T, Oharazawa A, Soya H: Young Investigators Award (5th place), European College of Sport Science, 2017.

+3 awards

B. Department of **Body**

Research Articles

Fujii N, Aoki-Murakami E, Tsuji B, Kenny GP, Nagashima K, Kondo N, Nishiyasu T. Body temperature and cold sensation during and following exercise under temperate room conditions in cold-sensitive young trained females. *Physiological Reports*, 5(20): e13465, 2017.

Fujii N, McNeely BD, Nishiyasu T, Kenny GP. Intradermal administration of atrial natriuretic peptide has no effect on sweating and cutaneous vasodilator responses in young male adults. *Temperature*, 4(4): 414-419, 2017.

Fujii N, Zhang SY, McNeely BD, Nishiyasu T, Kenny GP. Heat shock protein 90 contributes to cutaneous vasodilation through activating nitric oxide synthase in young male adults exercising in the heat. *Journal of Applied Physiology*, 123(4): 844-850, 2017.

Ichinose M, Ichinose-Kuwahara T, Watanabe K, Kondo N, Nishiyasu T. The carotid baroreflex modifies the pressor threshold of the muscle metaboreflex in humans. *American Journal of Physiology-Heart and Circulatory Physiology*, 313(3): H650-H657, 2017.

Dobashi K, Fujii N, Watanabe K, Tsuji B, Sasaki Y, Fujimoto T, Tanigawa S, Nishiyasu T. Effect of voluntary hypocapnic hyperventilation or moderate hypoxia on metabolic and heart rate responses during high-intensity intermittent exercise. *European journal of applied physiology*, 117(8): 1573-1583, 2017.

Fujii N, Nikawa T, Tsuji B, Kenny GP, Kondo N, Nishiyasu T. Wearing graduated compression stockings augments cutaneous vasodilation but not sweating during exercise in the heat. *Physiological Reports*, 5(9): e13252, 2017.

Fujii N, Louie JC, McNeely BD, Amano T, Nishiyasu T, Kenny GP. Mechanisms of nicotine-induced cutaneous vasodilation and sweating in young adults: roles for KCa, KATP, and KV channels, nitric oxide, and prostanoids. *Appl Physiol Nutr Metab*, 42(5): 470-478, 2017.

Fujii N, McNeely BD, Nishiyasu T, Kenny GP. Prostacyclin does not affect sweating but

induces skin vasodilatation to a greater extent in older versus younger women: roles of NO and KCa channels. *Exp Physiol*, 102(5): 578-586, 2017.

Fujii N, Nikawa T, Tsuji B, Kondo N, Kenny GP, Nishiyasu T. Wearing graduated compression stockings augments cutaneous vasodilation in heat-stressed resting humans. *Eur J Appl Physiol*, 117(5): 921-929, 2017.

McNeely BD, Meade RD, Fujii N, Seely AJE, Sigal RJ, Kenny GP. Fluid replacement modulates oxidative stress-but not nitric oxide-mediated cutaneous vasodilation and sweating during prolonged exercise in the heat. *American Journal of Physiology-Regulatory, Integrative and Comparative Physiology*, 313(6): R730-R739, 2017.

Amano T, Fujii N, Kenny GP, Inoue Y, Kondo N. Do nitric oxide synthase and cyclooxygenase contribute to sweating response during passive heating in endurance-trained athletes? *Physiological Reports*, 5(17): e13403, 2017.

Amano T, Shitara Y, Fujii N, Inoue Y, Kondo N. Evidence for β -adrenergic modulation of sweating during incremental exercise in habitually trained males. *Journal of applied physiology*, 123(1): 182-189, 2017.

Louie JC, Fujii N, Meade RD, McNeely BD, Kenny GP. The roles of KCa, KATP, and KV channels in regulating cutaneous vasodilation and sweating during exercise in the heat. *American Journal of Physiology-Regulatory, Integrative and Comparative Physiology*, 312: R821-R827, 2017.

Fujii N, Meade R, Akbari P, Louie JC, Alexander L, Boulay P, Sigal R, Kenny GP. No effect of ascorbate on cutaneous vasodilation and sweating in older men and those with type 2 diabetes exercising in the heat. *Physiological Reports*, 5(7): e13238, 2017.

Fujii N, McNeely BD, Zhang SY, Abdellaoui YC, Danquah MO, Kenny GP. Activation of protease-activated receptor 2 mediates cutaneous vasodilatation but not sweating: roles of nitric oxide synthase and cyclo-oxygenase. *Exp Physiol*, 102: 265-272, 2017.

Haqani B, Fujii N, Kondo N, Kenny GP. The mechanisms underlying the muscle metaboreflex modulation of sweating and cutaneous blood flow in passively heated humans. *Physiol Rep*, 5: e13123, 2017.

Amano T, Fujii N, Louie JC, Meade RD, Kenny GP. Individual variations in nitric oxide synthase-dependent sweating in young and older males during exercise in the heat: role of aerobic power. *Physiol Rep*, 5: e13208, 2017.

Fujii N, Amano T, Halili L, Louie JC, Zhang SY, McNeely BD, Kenny GP. Intradermal administration of endothelin-1 attenuates endothelium-dependent and -independent cutaneous vasodilation via Rho kinase in young adults. *Am J Physiol Regul Integr Comp Physiol*, 12: R23-R30, 2017.

Fujii N, Louie JC, McNeely BD, Zhang SY, Tran MA, Kenny GP. Nicotinic receptor activation augments muscarinic receptor-mediated eccrine sweating but not cutaneous vasodilatation in young males. *Exp Physiol*, 102: 245-254, 2017.

Fujii N, McNeely BD, Kenny GP. Nitric oxide synthase and cyclooxygenase modulate β -adrenergic cutaneous vasodilatation and sweating in young men. *J Physiol*, 594: 1173-1184, 2017.

Osuka Y, Fujita S, Kitano N, Kosaki K, Seol JH, Sawano Y, Shi HH, Fujii Y, Maeda S, Okura T, Kobayashi H, Tanaka T. Effects of aerobic and resistance training combined with fortified milk on muscle mass, muscle strength, and physical performance in older adults: a randomized controlled trial. *The journal of nutrition, health & aging*, 21(10): 1349-1357, 2017.

Yoshikawa T, Kumagai H, Myoenzono K, Zempo-Miyaki A, Tsujimoto T, Tanaka K, Maeda S. Effects of dietary modification with weight loss on central blood pressure during oral glucose tolerance test in overweight/obese men. *Artery Res*, 20: 27-34, 2017.

Kosaki K, Kamijio-Ikemori A, Sugaya T, Tanahashi K, Kumagai H, Sawano Y, Akazawa N, Ra SG, Kimura K, Shibagaki Y, Maeda S. Relationship between exercise capacity and urinary liver-type fatty acid-binding protein in middle-aged and older individuals. *Clinical and experimental nephrology*, 21(5): 810-817, 2017.

Zempo-Miyaki A, Maeda S, Otsuki T. Effect of Chlorella-derived multicomponent supplementation on maximal oxygen uptake and serum vitamin B2 concentration in young men. *Journal of clinical biochemistry and nutrition*, 61(2): 135-139, 2017.

Tanahashi K, Kosaki K, Sawano Y, Yoshikawa T, Tagawa K, Kumagai H, Akazawa N, Maeda S. Impact of age and aerobic exercise training on conduit artery wall thickness: role of the shear pattern. *Journal of vascular research*, 54(5): 272-279, 2017.

Komatsu M, Akazawa N, Tanahashi K, Kumagai H, Yoshikawa T, Kosaki K, Zempo-Miyaki A, Maeda S. Central blood pressure is associated with trunk flexibility in older adults. *Artery Research*, 19: 91-96, 2017.

Kosaki K, Kamijio-Ikemori A, Sugaya T, Tanahashi K, Kumagai H, Sawano Y, Osuka Y, Tanaka K, Kimura K, Shibagaki Y, Maeda S. Association between muscular strength and intrarenal vascular resistance in middle-aged and older individuals. *Experimental gerontology*, 91: 72-78, 2017.

Sugawara J, Tomoto T, Imai T, Maeda S, Ogoh S. Impact of mild orthostatic stress on aortic-cerebral hemodynamic transmission: insight from the frequency-domain. *American Journal of Physiology-Heart and Circulatory Physiology*, 312(5): H1076-H1084, 2017.

Tomoto T, Maeda S, Sugawara J. Influence of blood flow velocity on arterial distensibility of carotid artery in healthy men. *J Physiol Sci*, 67(1): 191-196, 2017.

Monma T, Takeda F, Okura T. Physical activities impact sense of coherence among community-dwelling older adults. *Geriatrics & Gerontology International*, 17(11): 2208-2215, 2017.

Nawaz A, Aminuddin A, Kado T, Takikawa A, Yamamoto S, Tsuneyama K, Igarashi Y, Ikutani M, Nishida Y, Nagai Y, Takatsu K, Imura J, Sasahara M, Okazaki Y, Ueki K, Okamura T, Tokuyama K, Ando A, Matsumoto M, Mori H, Nakagawa T, Kobayashi N, Saeki K, Usui I, Fujisaka S, Tobe K. CD206⁺ M2-like macrophages regulate glucose metabolism by inhibiting proliferation of adipocyte progenitors. *Nature Commun*, 8(1): 286, 2017.

Park I, Ochiai R, Ogata H, Kayaba M, Hari S, Hibi M, Katsuragi Y, Satoh M, Tokuyama K. Effects of subacute ingestion of chlorogenic acids on sleep architecture and energy metabolism through activity of the autonomic nervous system: a randomised, placebo-

controlled, double-blinded crossover trial. *British Journal of Nutrition*, 117(7): 979-984, 2017.

Iwayama K, Kawabuchi R, Nabekura Y, Kurihara R, Park I, Kobayashi M, Ogata H, Kayaba M, Omi N, Satoh M, Tokuyama K. Exercise before breakfast increases 24-h fat oxidation in female subjects. *PLoS ONE*, 12(7): e0180472, 2017.

Kayaba M, Park I, Iwayama K, Seya Y, Ogata H, Yajima K, Satoh M, Tokuyama K. Energy metabolism differs between sleep stages and begins to increase prior to awakening. *Metabolism*, 69: 14-23, 2017.

Misu H, Takayama H, Saito Y, Mita Y, Kikuchi A, Ishii K, Chikamoto K, Kanamori T, Tajima N, Lan F, Takeshita Y, Honda M, Tanaka M, Kato S, Matsuyama N, Yoshioka Y, Iwayama K, Tokuyama K, Akazawa N, Maeda S, Takekoshi K, Matsugo S, Noguchi N, Kaneko S, Takamura T. Deficiency of the hepatokine selenoprotein P increases responsiveness to exercise in mice through upregulation of ROS and AMPK in muscle. *Nature Medicine*, 23(4): 508-516, 2017.

Nao K, Ogata H, Omi N. Comparison between energy intake and expenditure using accelerometers in large scale disaster scenarios. *Annals of Nutrition and Metabolism*, 71(2): 280-281, 2017.

Kohara A, Machida M, Setoguchi Y, Ito R, Sugitani M, Maruki-Uchida H, Inagaki H, Ito T, Omi N, Takemasa T. Enzymatically modified isoquercitrin supplementation intensifies plantaris muscle fiber hypertrophy in functionally overloaded mice. *Journal of the International Society of Sports Nutrition*, 14(32): 2017

+17 articles

Books

3 books

Distinctions/Awards

Dobashi K, Fujii N, Fujimoto T, Tanigawa S, Ichinose M, Nishiyasu T: Oral presentation 1st prize, 2017.

+4 awards

C. Department of **Technique**

Research Articles

Yamakawa KK, Shimojo H, Takagi H, Tsubakimoto S, Sengoku Y. Effect of increased kick frequency on propelling efficiency and muscular co-activation during underwater dolphin kick. *Human Movement Science*, 54: 276-286, 2017.

Yamakawa KK, Shimojo H, Takagi H, Tsubakimoto S, Sengoku Y. Kinematic and EMG data during underwater dolphin kick change while synchronizing with or without synchronization of kick frequency with the beat of a metronome. *Data in brief*, 14: 28-31, 2017.

Tsunokawa T, Tsuno T, Mankyu H, Takagi H, Ogita F. The effect of paddles on pressure and force generation at the hand during front crawl. *Human Movement Science*, 57: 409-416, 2017.

Narita K, Nakashima M, Takagi H. Developing a methodology for estimating the drag in front-crawl swimming at various velocities. *Journal of biomechanics*, 54: 123-128, 2017.

Kobayashi K, Takagi H, Tsubakimoto S, Sengoku Y. Suitability of electrodes waterproofing treatment in underwater surface electromyography measurement. *The Bulletin of Faculty of Health and Sport Sciences*, 40: 65-70, 2017.

Asai T, Hong S, Kimachi K, Nakamura A. Flow visualisation of non-spinning soccer ball using direct numerical simulation. *Proceedings of The 11th Pacific Symposium on Flow Visualization and Image Processing*, 2017.

Goff JE, Kelley J, Hobson CM, Seo K, Asai T, Choppin SB. Creating drag and lift curves from soccer trajectories. *European Journal of Physics*, 38(4): 2017.

Hong S, Asai T. Aerodynamic effects of dimples on soccer ball surfaces. *Heliyon*, 3(10): e00432, 2017.

Asai T, Hong S, Ijuin K. Flow visualisation of downhill skiers using the lattice Boltzmann method. *Eur. J. Phys*, 38: 24002, 2017.

Asai T, Hong S. Investigation of kinematics of knuckling shot in soccer. *Proc. of SPIE*, 10328: 103281S, 2017.

Enomoto Y, Aibara T, Sugimoto K, Seki K, Yokozawa T, Murata M. Estimation of the center of mass and pelvis movement in running using an inertia sensor mounted on sacrum. *35th International Conference of Biomechanics in Sports Proceedings*, 35(1): 500-503, 2017.

Nishiura T, Seki K, Enomoto Y, Kogawa D: Effect of shoes and tights with the support function on support leg during running. *35th International Conference of Biomechanics in Sports Proceedings*, 35(1): 627-630, 2017.

Sugimoto K, Enomoto Y, Seki K. The interrelationship of joint stiffness in drop jump under different conditions: A single-subject design. *35th International Conference of Biomechanics in Sports Proceedings*, 35(1): 979-982, 2017.

Shibata A, Koyama H, Enomoto Y. Analysis of the transformation of the velocity of the center of gravity in running single leg horizontal jump. *35th International Conference of Biomechanics in Sports Proceedings*, 35(1): 607-610, 2017.

Seki K, Sugimoto K, Kyrolainen H, Enomoto Y. Effect of biomechanical factors on energy cost during running at varying inclines. *International Conference of Biomechanics in Sports Proceedings*, 35(1): 1100-1103, 2017.

+9 articles

Books

Sanders R, Andersen J, Takagi H: The Segmental Movements in Front Crawl Swimming. (Bertram Müller, Sebastian I. Wolf, Gert-Peter Brueggemann, Zhigang Deng, Andrew McIntosh, Freeman Miller, William Scott Selbie. Eds.), *Handbook of Human Motion*, Springer International Publishing, 2017.

Hong S, Asai T: Chapter 7, Impact phase of the knuckle shot. *Football Biomechanics*, Routledge, 68-76, 2017.