

Curriculum Vitae

Shinji MIURA, PhD

Education:

- 1989: Graduated from Kyoto Pharmaceutical University.
- 1991: Completed Master Program of Pharmaceutical Sciences, Graduate School of Pharmaceutical Sciences, Kyoto Pharmaceutical University.
- 1996: Completed Doctoral Program of Pharmaceutical Sciences, Graduate School of Pharmaceutical Sciences, University of Shizuoka, under supervision of Prof. Isao Tomita, Doctor of Pharmaceutical Sciences (Ph.D).

Faculty Appointments:

- 1998: Visiting Fellow (JSPS Fellow), Laboratory of Cellular and Developmental Biology (LCDB), National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), National Institutes of Health (NIH), under supervision of Dr Constantine Londos.
- 2001: Researcher, Division of Clinical Nutrition, Department of Human Nutrition, National Institute of Health and Nutrition.
- 2004: Senior Researcher, Division of Clinical Nutrition, Department of Human Nutrition, National Institute of Health and Nutrition.
- 2006: Project Leader, Project for Lipid and Carbohydrate Metabolism, Nutritional Science Program, National Institute of Health and Nutrition.
- 2010: Visiting Associate Professor, Department of Health Promotion Sciences, Graduate School of Human Health Sciences, Tokyo Metropolitan University.
- 2011: Head, Section of Lipid and Carbohydrate Metabolism, Department of Nutritional Science, National Institute of Health and Nutrition.
- 2012: Associate Professor, Chief, Laboratory of Nutritional Biochemistry, Department of Nutritional Sciences, School of Food and Nutritional Sciences, and Graduate School of Nutritional and Environmental Sciences, University of Shizuoka.
- 2014: Professor, Chief, Laboratory of Nutritional Biochemistry, Department of Nutritional Sciences, School of Food and Nutritional Sciences, and Graduate School of Nutritional and Environmental Sciences, University of Shizuoka.
- 2015: Visiting Professor, Department of Health Promotion Sciences, Graduate School of Human Health Sciences, Tokyo Metropolitan University.

Membership in Academic Societies:

American Society for Biochemistry and Molecular Biology

Japanese Society of Physical Fitness and Sports Medicine

Japan Society of Nutrition and Food Science

Japanese Conference on the Biochemistry of Lipids

Publications: (articles in peer-reviewed journals)

1. Ishikawa, T., Kitaura, Y., Kadota, Y., Morishita, Y., Ota, M., Yamanaka, F., Xu, M., Ikawa, M., Inoue, N., Kawano, F., Nakai, N., Murakami, T., Miura, S., Hatazawa, Y., Kamei, Y., and Shimomura, Y., Muscle-specific deletion of BDK amplifies loss of myofibrillar protein during protein undernutrition. *Sci Rep*, 7, 39825 (2017).
2. Hatazawa, Y., Minami, K., Yoshimura, R., Onishi, T., Manio, M.C., Inoue, K., Sawada, N., Suzuki, O., Miura, S., and Kamei, Y., Deletion of the transcriptional coactivator PGC1 α in skeletal muscles is associated with reduced expression of genes related to oxidative muscle function. *Biochem Biophys Res Commun*, 481, 251-258 (2016).
3. Sato, T., Yoshida, Y., Morita, A., Mori, N., and Miura, S., Glycerol-3-phosphate dehydrogenase 1 deficiency induces compensatory amino acid metabolism during fasting in mice. *Metabolism*, 65, 1646-1656 (2016).
4. Yoshimura, R., Minami, K., Matsuda, J., Sawada, N., Miura, S., and Kamei, Y., Phosphorylation of 4EBP by oral leucine administration was suppressed in the skeletal muscle of PGC-1 α knockout mice. *Biosci Biotech Biochem*, 80, 288-290 (2016).
5. Senoo, N., Miyoshi, N., Goto-Inoue, N., Minami, K., Yoshimura, R., Morita, A., Sawada, N., Matsuda, J., Ogawa, Y., Setou, M., Kamei, Y., and Miura, S., PGC-1 α -mediated changes in phospholipid profiles of exercise-trained skeletal muscle. *J Lipid Res*, 56, 2286-2296 (2015).
6. Hatazawa, Y., Senoo, N., Tadaishi, M., Ogawa, Y., Ezaki, O., Kamei, Y., and Miura, S., Metabolomic analysis of the skeletal muscle of mice overexpressing PGC-1 α . *PLoS ONE*, 10(6): e0129084 (2015).
7. Sato, T., Morita, A., Mori, N., and Miura, S.: Glycerol 3-phosphate dehydrogenase 1 deficiency enhances exercise capacity due to increased lipid oxidation during strenuous exercise. *Biochem Biophys Res Commun*, 457, 653-658 (2015).
8. Kano, Y., Miura, S., Eshima, H., Ezaki, O., and Poole, D.C.: The effect of PGC-1 α on control of microvascular PO₂ kinetics following onset of muscle contractions. *J Appl Physiol*, 117, 163-170 (2014).
9. Sato, T., Morita, A., Mori, N., and Miura, S.: The role of glycerol-3-phosphate dehydrogenase 1 in the progression of fatty liver after acute ethanol administration in mice. *Biochem Biophys Res Commun*, 444, 525-530 (2014).
10. Hatazawa, Y., Tadaishi, M., Nagaïke, Y., Morita, A., Ogawa, Y., Ezaki, O., Takai-Igarashi, T., Kitaura, Y., Shimomura, Y., Kamei, Y., Miura, S.: PGC-1 α -mediated branched-chain amino acid metabolism in the skeletal muscle. *PLoS ONE*, 9(3): e91006 (2014).
11. Miura, S., Kai, Y., Tadaishi, M., Tokutake, Y., Sakamoto, K., Bruce, C.R., Febbraio, M.A., Kita, K., Chohnan, S., and Ezaki, O. Marked phenotypic differences of endurance performance and exercise-induced oxygen consumption between AMPK and LKB1 deficiency in mouse skeletal muscle – changes occurring in the diaphragm. *Am J Physiol Endocrinol Metab*, 305, E213-E229 (2013).
12. Ehara T., Kamei Y., Takahashi M., Yuan X., Kanai S., Tamura E., Tanaka M., Yamazaki T., Miura S., Ezaki O., Sukanami T., Okano M., Ogawa Y. Role of DNA methylation in the regulation of lipogenic glycerol-3-phosphate acyltransferase 1 gene expression in the mouse neonatal liver. *Diabetes* 61, 2442-2450 (2012).
13. Yamazaki T., Kishimoto K., Miura S., Ezaki O. Dietary β -conglycinin prevents fatty liver induced by a high-fat diet by a decrease in peroxisome proliferator-activated receptor γ 2 protein. *J Nutr Biochem* 23, 123-132 (2012).

14. Tadaishi, M., Miura, S., Kai, Y., Kano, Y., Oishi, Y., and Ezaki, O.: Skeletal muscle-specific expression of PGC-1 α -b, an exercise-responsive isoform, increases exercise capacity and peak oxygen uptake. *PLoS ONE*, 6(12): e28290 (2011).
15. Kano, Y., Poole, D.C., Sudo, M., Hirachi, T., Miura, S., and Ezaki, O.: Control of microvascular PO₂ kinetics following onset of muscle contractions: Role for AMPK. *Am J Physiol Regul Integr Comp Physiol*, 301, R1350-R1357 (2011).
16. Sugita, S., Kamei, Y., Akaike, F., Suganami, T., Kanai, S., Hattori, M., Manabe, Y., Fujii, N., Takai-Igarashi, T., Tadaishi, M., Oka, J., Aburatani, H., Yamada, T., Katagiri, H., Kakehi, S., Tamura, Y., Kubo, H., Nishida, K., Miura, S., Ezaki, O., and Ogawa, Y.: Transgenic mice overexpressing RXR γ in skeletal muscle showed increased systemic glucose tolerance with increased muscle glucose uptake. *PLoS ONE*, 6(5): e20467 (2011).
17. Tadaishi, M., Miura, S., Kai, Y., Kawasaki, E., Koshinaka, K., Kawanaka, K., Nagata, J., Oishi, Y., and Ezaki, O.: Effect of exercise intensity and AICAR on isoform-specific expressions of murine skeletal muscle PGC-1 α mRNA: a role of β 2-adrenergic receptor activation. *Am J Physiol Endocrinol Metab*, 300, E341-E349 (2011).
18. Yamazaki, T., Shiraishi, S., Kishimoto, K., Miura, S., and Ezaki, O.: An increase in liver PPAR γ 2 is an initial event to induce fatty liver in response to a diet high in butter: PPAR γ 2 knockdown improves fatty liver induced by high-saturated fat. *J Nutr Biochem*, 22, 543-53 (2011).
19. Yamazaki, Y., Kamei, Y., Sugita, S., Akaike, F., Kanai, S., Miura, S., Hirata, Y., Troen, B.R., Kitamura, T., Nishino, I., Suganami, T., Ezaki, O., and Ogawa, Y.: The cathepsin L gene is a direct target of FOXO1 in the skeletal muscle. *Biochem J*, 427, 171-178 (2010).
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21. Setsuie, R., Suzuki, M., Kabuta, T., Fujita, H., Miura, S., Ichihara, N., Yamada, D., Wang, Y.L., Ezaki, O., Suzuki, Y., and Wada, K.: Ubiquitin C-terminal hydrolase-L3-knockout mice are resistant to diet-induced obesity and show increased activation of AMP-activated protein kinase in skeletal muscle. *FASEB J*, 23, 4148-4157 (2009).
22. Chiba, T., Kamei, Y., Shimizu, T., Shirasawa, T., Katsumata, A., Shiraishi, L., Sugita, S., Ogawa, Y., Miura, S., and Ezaki, O.: Overexpression of FOXO1 in skeletal muscle does not alter longevity in mice. *Mech Ageing Dev*, 130, 420-428 (2009).
23. Sakakibara, I., Fujino, T., Ishii, M., Tanaka, T., Shimosawa, T., Miura, S., Zhang, W., Tokutake, Y., Yamamoto, J., Awano, M., Iwasaki, S., Motoike, T., Okamura, M., Inagaki, T., Kita, K., Ezaki, O., Naito, M., Kuwaki, T., Chohnan, S., Yamamoto, T., Hammer R.E., Kodama, T., Yanagisawa, M., and Sakai, J.: Fasting-Induced hypothermia and reduced energy production in mice lacking acetyl-CoA synthetase 2. *Cell Metab*, 9, 191-202 (2009).
24. Miura, S., Kai, Y., Kamei, Y., Bruce, C.R., Kubota, N., Febbraio, M.A., Kadowaki, T., and Ezaki, O.: α 2-AMPK activity is not essential for an increase in fatty acid oxidation during low-intensity exercise. *Am J Physiol Endocrinol Metab*, 296, E47-E55 (2009).
25. Wada, S., Yamazaki, T., Kawano, Y., Miura, S., and Ezaki, O.: Fish oil fed previously prevents acute ethanol-induced fatty liver in mice. *J Hepatology*, 49, 441-450 (2008).
26. Miura, S., Kai, Y., Kamei, Y., and Ezaki, O.: Isoform-specific increases in murine skeletal muscle peroxisome proliferators-activated receptor- γ coactivator-1 α (PGC-1 α) mRNA in response to β 2-adrenergic receptor activation and exercise. *Endocrinology*, 149, 4527-4533 (2008).
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35. Miura, S., Tsunoda, N., Ikeda, S., Kai, Y., Ono, M., Maruyama, K., Takahashi, M. Mochida, K., Matsuda, J., Lane, M.D., and Ezaki, O.: Regulatory sequence elements of mouse GLUT4 gene expression in adipose tissues. *Biochem Biophys Res Commun*, 312, 277-284 (2003).
36. Miura, S., Nagura, H., Sawamura, F., Tomita, I., Kawai, E., Mochizuki, N., Ikeda, M., Kraemer, F.B., and Tomita, T.: Sterol-mediated regulation of hormone-sensitive lipase in 3T3-L1 adipocytes. *Lipids* 38, 743-750 (2003).
37. Miura, S., Kai, Y., Ono, M., and Ezaki, O.: Overexpression of peroxisome proliferator-activated receptor coactivator-1 α (PGC-1 α) down-regulates GLUT4 mRNA in skeletal muscles. *J Biol Chem*, 278, 31385-31390 (2003).
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45. Miura, S., Chiba, T., Mochizuki, N., Nagura, H., Nemoto, K., Tomita, I. and Tomita, T.: Cholesterol-mediated changes of neutral cholesterol esterase activity in macrophages. Mechanism for mobilization of cholesteryl esters in lipid droplets by HDL. *Arterioscler Thromb Vasc Biol*, 17 (11), 3033-3040 (1997).
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53. Hirayama, T., Miura, S., Araki, M., Takeo, Y. and Watanabe, T.: Fluorometric method for determination of 1, 2-unsaturated aldehydes in autooxidized lipids with 2,4-diaminotoluene. *J Assoc Off Anal Chem*, 73(4), 590-594 (1990).
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