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**CV (March 6, 2017)**

**NAME**

Kayoko Shimoi

**POSITION**

Professor

**AFFILIATION**

Laboratory of Biochemistry and Toxicology  
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**EDUCATION**

BSc Faculty of Science, Nara Women's University, March 1976  
Ph.D. Graduate School of Humanities and Sciences, Nara Women's University,  
March 1990

**EMPLOYMENT**

1979-1983 Research associate, National Institute of Genetics  
1983 Research Assistant Professor, Shizuoka College of Pharmacy  
1987 Research Assistant Professor, School of Pharmaceutical Sciences,  
University of Shizuoka  
1991 Research Assistant Professor, School of Food and Nutritional Sciences,  
University of Shizuoka  
1995 Visiting Scholar, MRC Cell Mutation Unit, Sussex University, UK.  
2001 Associate Professor, Institute for Environmental Sciences,  
University of Shizuoka

- 2003 Visiting Scholar, College of Pharmacy, University of South Carolina, USA.
- 2005 Professor, Institute for Environmental Sciences, University of Shizuoka
- 2012 Professor, School of Food and Nutritional Sciences, University of Shizuoka

### **MENBERSHIP IN ACADEMIC SOCIETIES**

The Japanese Environmental Mutagen Society  
Japan Society for Bioscience, Biotechnology, and Agrochemistry  
Japanese Society of Food Factors  
Japanese Cancer Association  
American Association for Cancer Research  
The Japanese Biochemical Society  
The Japanese Society of Toxicology

### **CURRENT RESEARCH INTEREST**

1. Biological responses to environmental and social stress
2. Effect of environmental and social stress on biorhythm
3. How can we prevent some environmental and social stress related diseases ?

### **RECENT PUBLICATIONS**

- 1) Yasuda MT, Sakakibara H, Shimoi K.: Estrogen- and stress-induced DNA damage in breast cancer and chemoprevention with dietary flavonoid. *Genes Env.* 2017, 39: 10. [10.1186/s41021-016-0071-7](https://doi.org/10.1186/s41021-016-0071-7)
- 2) Sakakibara H, Yasuda MT, Shimoi K.: Effects of environmental and social stressors on biological rhythms. *J. Phys. Fitness Sports Med.* 2016, 5(2), 143-152.
- 3) Yasuda M T, Fujita K, Hosoya T, Imai S, Shimoi K: Absorption and Metabolism of Luteolin and Its Glycosides from the Extract of *Chrysanthemum morifolium* Flowers in Rats and Caco-2 Cells. *J Agric Food Chem.*, 2015, 63(35), 7693-9.
- 4) Terasaki M, Yasuda M, Makino M, Shimoi K: Aryl hydrocarbon receptor potency

of chlorinated parabens in the aquatic environment. *Environ. Sci.: Water Res. Technol.*, 2015, 1, 375-82.

- 5) Aoshima Y., Sakakibara H., Suzuki T.A., Yamazaki S., Shimoi K., Nocturnal light exposure alters hepatic Pai-1 expression by stimulating the adrenal pathway in C3H mice, *Exp Anim.*, 2014, 63(3), 331-8.
- 6) Sakakibara H., Ichikawa Y., Tajima S., Makino Y., Wakasugi Y., Shimoi K., Kobayashi S., Kumazawa S., Goda T., Practical application of flavonoid-poor menu meals to the study of the bioavailability of bilberry anthocyanins in human subjects, *Biosci Biotechnol Biochem.*, 2014, 78(10), 1748-52.
- 7) Kato A., Sakakibara H., Tsuboi H., Tatsumi A., Akimoto M., Shimoi K., Ishii T., Kaneko H., Nakayama T., Ohashi N., Depressive symptoms and their association with serum creatine kinase and lactate dehydrogenase in female nursing staff working under stressful environment - A preliminary study, *Biopsychosoc. Med.*, 2014, 8:21.
- 8) Terasaki M., Yasuda M., Shimoi K., Jozuka K., Makino M., Shiraishi F., Nakajima D., Evaluation of sensitizers found in wastewater from paper recycling areas, and their activation of the aryl hydrocarbon receptor in vitro, *Sci Total Environ.*, 2014, 493, 156-161.
- 9) Yamazaki S., Miyoshi N., Kawabata K., Yasuda M., Shimoi K., Quercetin-3-O-glucuronide inhibits noradrenaline-promoted invasion of MDA-MB-231 human breast cancer cells by blocking  $\beta$ 2-adrenergic signaling. *Arch Biochem Biophys.*, 2014, 557, 18-27.
- 10) Yamazaki S., Sakakibara H., Takemura H., Yasuda M., Shimoi K., Quercetin-3-O-glucuronide inhibits noradrenaline binding to  $\alpha$ 2-adrenergic receptor, thus suppressing DNA damage induced by treatment with 4-hydroxyestradiol and

noradrenaline in MCF-10A cells, *J. Steroid Biochem. Mol. Biol.*, 2014, 143, 122-9.

- 11) Sakakibara H., Ohura T., Kamiya Y., Yamanaka N., Shimada N., Shimoi K., and Guruge K S., Sex-dependent difference in the hepatic and pulmonary toxicological effects in mice administrated 7-chlorinated benz[a]anthracene, *Fund. Toxicol. Sci.*, 2014, 1(3), 101-8.
- 12) Tsurusaki T., Sakakibara H., Aoshima Y., Yamazaki S., Sakono M., and Shimoi K., Diurnal rhythmicity in biological processes involved in bioavailability of functional food factors, *J Clin Biochem Nutr.*, 2013, 52(3), 208-14.
- 13) Takemura H., Sakakibara H., Yamazaki S., Shimoi K., Breast cancer and flavonoids –A role in prevention, *Current Pharm. Design*, 2013, 19, 6125-6132.
- 14) Unno K., Iguchi K., Tanida N., Fujitani K., Takamori N., Yamamoto H., Ishii N., Nagano H., Nagashima T., Hara A., Shimoi K. and Hoshino M. Ingestion of theanine, an amino acid in tea, suppresses psychosocial stress in mice. *Exp Physiol.*, 2013, 98(1), 290-303.
- 15) Kido T., Sakakibara H., Ohura. T, Guruge K.S., Kojima M., Hasegawa J., Iwamura T., Yamanaka N., Masuda S., Sakaguchi M., Amagai T., Shimoi K., Evaluation of Chlorinated Benz[a]anthracene on hepatic toxicity in rats and mutagenic activity in Salmonella typhimurium, *Environ. Toxicol.*, 2013, 1, 21-30.
- 16) Sakakibara H, Ohura T, Kido T, Yamanaka N, Tanimura N, Shimoi K. Guruge KS. Organ-specific distribution of 7-chlorinated benz[a]anthracene and regulation of selected cytochrome P450 genes in rats. *J Toxicol Sci.* 2013, 38(1), 137-43.
- 17) Sakakibara H, Suzuki A, Kobayashi A, Motoyama K, Matsui A, Sayama K, Kato A, Ohashi N, Akimoto M, Nakayama T, Shimoi K. Social isolation stress induces hepatic hypertrophy in C57BL/6J mice. *J Toxicol Sci.*, 2012, 37(5), 1071-6.
- 18) Yamazaki S., Sakakibara H., Takemura H. and Shimoi K., 4-Hydroxyestradiol induces  $\gamma$ -H2AX in the presence of an inhibitor of catechol-*O*-methyltransferase in human breast cancer MCF-7 cells, *Genes and Environment*, 2012, 34, 129-135.

- 19) Okada Y., Yi YOTO T., Suzuki T., Sakuragawa S., Sakakibara H., Shimoi K. and Sugiura T., Wearable ECG Recorder with acceleration sensors for monitoring daily stress, *J. Med. Biol. Eng.*, 2013, 33(4), 420-426.
- 20) Itoh K., Masumori S., Nakajima M., Hayashi M., Sakakibara H. and Shimoi K., Differences in micronucleus induction in peripheral blood reticulocytes of mice exposed to N-ethyl-N-nitrosourea at light and dark dosing times, *J. Toxicol Sci.* 2012, 37, 427-30.
- 21) Unno K., Fujitani K., Takamori N., Takabayashi F., Maeda K.I., Miyazaki H., Iguchi K., Shimoi K., and Hoshino M., Theanine intake improves the shortened lifespan, cognitive dysfunction and behavioural depression that are induced by chronic psychosocial stress in mice, *Free Radic. Res.*, 2011, 45(8), 966-974.
- 22) Tsuboi H., Sakakibara H., Yamakawa-Kobayashi K., Tatsumi A., Inamori T., Hamamoto R., Suzuki A., Shimoi K., Val1483Ile polymorphism in the fatty acid synthase gene was associated with depressive symptoms under the influence of psychological stress, *J. Affect. Disord.*, 2011, 134(1-3), 448-485.
- 23) Kobayashi A., Yokoyama H., Kataoka J., Ishida T., Kuno H., Sugai S., Sakakibara H., and Shimoi K., Effects of spaced feeding on gene expression of hepatic transaminase and gluconeogenic enzymes in rats, *J. Toxicol. Sci.*, 2011, 36(3), 325-337.
- 24) Agawa S., Sakakibara H., Iwata R., Shimoi K., Hergesheimer A., and Kumazawa S., Anthocyanins in mesocarp/epicarp and endocarp of fresh açai (*Euterpe oleracea* Mart) and their antioxidant activity and bioavailability, *Food Sci. Technol. Res.*, 2011, 17(4), 327-334.
- 25) Sakakibara H., Romanowski CPN, Jakubcakova V, Flachskamm C, Shimoi K., and Kimura M., Feeble awake effects of plasminogen activator inhibitor type-1 in mice, *Behav. Brain Res.*, 220(2), 354-357, 2011.

