

# CURRICULUM VITAE

(April 1, 2022)

**Name:**

Family name: Ishimoto

Given name: Takahiro

**Sex:** Male

**Date of Birth:** 20 October 1989

**Place of Birth:** Fukui, Japan

**Marital Status:** Single

**Nationality:** Japanese

**Current Position:**

Assistant professor (March, 2019 ~)

Laboratory of Molecular Pharmacotherapeutics,

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**Education:**

University of Kanazawa, B.S. 2012 Pharmacy

University of Kanazawa, M.S. 2014 Pharmaceutical Sciences

University of Kanazawa, Ph.D. 2018 Pharmaceutical Sciences

**Research Experience:**

(April, 2015 ~ March, 2017)

- Japan Society for the Promotion of Science (JSPS) Research Fellow

(April, 2018 ~ September, 2018)

- Postdoctoral fellow (Division of Developmental Biology, Cincinnati Children's Hospital Medical Center)

(October, 2018 ~ February, 2019)

- Postdoctoral fellow (Neural Connectivity Development in Physiology and Disease Laboratory, Burke Neurological Institute)

#### **Society/Membership:**

- (1) Japanese Society for Neurochemistry (JSN)
- (2) Japanese Pharmacological Society (JPS)
- (3) International Society for Neurochemistry (ISN)
- (4) Japanese Society of Neuropsychopharmacology (JSNP)
- (5) Pharmaceutical Society of Japan (PSJ)

#### **Publications (original articles):**                      \*Corresponding author

1. Agustina R, Masuo Y, Kido Y, Shinoda K, Ishimoto T, Kato Y\*. Identification of Food-derived Isoflavone Sulfates as Inhibition Markers for Intestinal Breast Cancer Resistance Proteins. *Drug Metab Dispos*, 49: 972-984.
2. Nishiyama M, Nakamichi N, Yoshimura T, Masuo Y, Komori T, Ishimoto T, Matsuo JI, Kato Y\*. Homostachydrine is a Xenobiotic Substrate of OCTN1/SLC22A4 and Potentially Sensitizes Pentylentetrazole-Induced Seizures in Mice. *Neurochem Res*, 45:2664-2678, 2020.
3. Nakamichi N, Nakao S, Nishiyama M, Takeda Y, Ishimoto T, Masuo Y, Matsumoto S, Suzuki M, Kato Y\*. Oral Administration of the Food Derived Hydrophilic Antioxidant Ergothioneine Enhances Object Recognition Memory in Mice. *Curr Mol Pharmacol*, 14:220-233, 2021.
4. Nakamichi N, Matsumoto Y, Kawanishi T, Ishimoto T, Masuo Y, Horikawa M, Kato Y\*. Maturation Characterization of Mouse Cortical Neurons Three-Dimensionally Cultured in Functional Polymer FP001-Containing Medium. *Biol Pharm Bull*, 42:1545-1553, 2019.
5. Ishimoto T, Masuo Y, Kato Y, Nakamichi N\*. Ergothioneine-induced neuronal differentiation is mediated through activation of S6K1 and neurotrophin 4/5-TrkB signaling in murine neural stem cells. *Cell Signal*, 53:269-280, 2019.
6. Ishimoto T, Nakamichi N\*, Nishijima H, Masuo Y, Kato Y. Carnitine/Organic Cation Transporter OCTN1 Negatively Regulates Activation in Murine Cultured Microglial Cells. *Neurochem Res*, 43: 116-128, 2018.

7. Nakamichi N, Ishimoto T, Yamauchi Y, Masuo Y, Kato Y<sup>\*</sup>. Screening to Identify Multidrug Resistance-Associated Protein Inhibitors with Neuroblastoma-Selective Cytotoxicity. *Biol Pharm Bull*, **39**: 1638-1645, 2016.
8. Nakamichi N, Nakayama K, Ishimoto T, Masuo Y, Wakayama T, Sekiguchi H, Sutoh K, Usumi K, Iseki S, Kato Y<sup>\*</sup>. Food-derived hydrophilic antioxidant ergothioneine is distributed to the brain and exerts antidepressant effect in mice. *Brain and Behavior*, **6**: e00477, 2016.
9. Ben Said M, Grati M, Ishimoto T, Zou B, Chakchouk I, Ma Q, Yao Q, Hammami B, Yan D, Mittal R, Nakamichi N, Ghorbel A, Neng L, Tekin M, Shi XR, Kato Y, Masmoudi S<sup>\*</sup>, Lu Z, Hmani M, Liu X<sup>\*</sup>. A mutation in SLC22A4 encoding an organic cation transporter expressed in the cochlea stria endothelium causes human recessive non-syndromic hearing loss DFNB60. *Hum Genet*, **135**: 513-524, 2016.
10. Naka K<sup>\*</sup>, Jomen Y, Ishihara K, Kim J, Ishimoto T, Bae EJ, Mohney RP, Stirdivant SM, Oshima H, Oshima M, Kim DW, Nakauchi H, Takihara Y, Kato Y, Ooshima A, Kim SJ<sup>\*</sup>. Dipeptide species regulate p38MAPK-Smad3 signalling to maintain chronic myelogenous leukaemia stem cells. *Nature Commun*, **6**: 8039, 2015.
11. Shimizu T, Kijima A, Masuo Y, Ishimoto T, Sugiura T, Takahashi S, Nakamichi N, Kato Y<sup>\*</sup>. Gene ablation of carnitine/organic cation transporter 1 reduces gastrointestinal absorption of 5-aminosalicylate in mice. *Biol Pharm Bull*, **38**: 774-780, 2015.
12. Ishimoto T, Nakamichi N, Hosotani H, Masuo Y, Sugiura T, Kato Y<sup>\*</sup>. Organic cation transporter-mediated ergothioneine uptake in mouse neural progenitor cells suppresses proliferation and promotes differentiation into neurons. *PLoS One*, **9**: e89434, 2014.
13. Nakamichi N, Shima H, Asano S, Ishimoto T, Sugiura T, Matsubara K, Kusuhara H, Sugiyama Y, Sai Y, Miyamoto K, Tsuji A, Kato Y<sup>\*</sup>. Involvement of carnitine/organic cation transporter OCTN1/SLC22A4 in gastrointestinal absorption of metformin. *J Pharm Sci*, **102**: 3407-3417, 2013.

#### **Publications (review articles):**

1. Ishimoto T, Kato Y<sup>\*</sup>. Ergothioneine in the brain. *FEBS Lett*, *in press*.
2. Ishimoto T, Kato Y<sup>\*</sup>. Regulation of Neurogenesis by Organic Cation Transporters: Potential Therapeutic Implications. *Handb Exp Pharmacol* 266: 281-300, 2021.
3. 石本尚大、加藤将夫<sup>\*</sup> 中枢神経系細胞に発現する薬物トランスポーターとその働き. *医学のあゆみ* 271(1): 33-41, 2019.
4. 石本尚大、加藤将夫<sup>\*</sup> 薬物動態とは～薬物の生体内動態と薬物速度論～Clinical Calcium

26(11)「骨粗鬆症治療薬の薬物動態と使用法～薬物の生体内動態と薬物速度論～」:9-17,  
2016.

**Grants:**

- 2022** Mochida Memorial Foundation for Medical and Pharmaceutical Research
- 2020** Grant-in-Aid for Scientific Research provided by the Ministry of Education, Science and Culture of Japan (No. 20K15991)
- 2019** Grant-in-Aid for Scientific Research provided by the Ministry of Education, Science and Culture of Japan (No. 19K23797)
- 2018** “Overseas Postdoctoral Fellowship” from the Uehara Memorial Foundation (April, 2018 ~ April, 2019)
- 2015** Grant-in-Aid for Scientific Research provided by the Ministry of Education, Science and Culture of Japan (No. 15J03940)

**Awards:**

APSTJ , Global Education Seminar Presentation Award 2019