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Professional Experience:

2019 - present: RIKEN Hakubi Team Leader, RIKEN Cluster for Pioneering Research/ Center for Brain Science,

2012 - 2019: Postdoctoral research fellow, Department of Biology, Brandeis University, USA

2012: Postdoctoral Fellow. The University of Tokyo, Graduate School of Pharmaceutical Sciences, Tokyo, Japan

Education:

2009-2012: The University of Tokyo, Graduate School of Pharmaceutical Sciences, Tokyo, Japan, PhD (Integrated Pharmaceutical Sciences)

2007-2009: The University of Tokyo, Graduate School of Pharmaceutical Sciences, Tokyo, Japan, Master of Science (Integrated Pharmaceutical Sciences)

2003-2007: The University of Tokyo, Faculty of Pharmaceutical Sciences, Tokyo, Japan, Bachelor of Science (Pharmaceutical Sciences)

Honors and Awards

2016-2018:

The Research Fellowships of the Japan Society for the Promotion of Science for Postdoctoral Fellowship for Research Abroad.

2014:

Best Postdoctoral Poster Presentation Award (Brandeis Volen Retreat)

2013:

Publication was selected for F1000 (<http://f1000.com/prime>)

2009-2012:

The Research Fellowships of the Japan Society for the Promotion of Science for Young Scientists.

2009:

Selected for Best Oral Presentation Award (the 82nd Annual Meeting of the Japanese Biochemical Society)

Publications:

Takeishi, A., ‘Environmental-temperature and internal-state dependent thermotaxis plasticity of nematodes’, *Current Opinion in Neurobiology*, 74:102541, 2022

Galatsis, K.N., Takeishi, A. Insulin Signaling Acts Extensively in *C. elegans* Starvation-Associated Learning and Behavioral Plasticity. *J Cell Sci Therapy*, S5:315, 2021

Yeon, J., **Takeishi, A.**, Sengupta, P. Chronic vs acute manipulations reveal degeneracy in a thermosensory neuron network. *microPublication Biology*, 10.17912/micropub.biology.000355., 2021

Takeishi, A., Yeon, J., Harris, N., Yang, W., Sengupta, P. Feeding state functionally reconfigures a sensory circuit to drive thermosensory behavioral plasticity. *eLife*, 61167. PMID: PMC7644224, 2020

Takeishi, A., Takagaki N., Kuhara A., Temperature signaling underlying thermotaxis and cold tolerance in *Caenorhabditis elegans*, *Journal of Neurogenetics*, pp351-362, 2020.

Takeishi, A., Sengupta, P., Guanylyl cyclases may function as thermosensors in *C. elegans*, *Jikkenigaku*, Sep, 2016.

Takeishi, A., Yu, Y.V., Hapiak, V.M., Bell, H.W., O’Leary, T., Sengupta, P., Receptor-type guanylyl cyclases confer thermosensory responses in *C. elegans*, *Neuron*, 90, pp235-244, 2016.

Neal, S.J., **Takeishi, A.**, O’Donnell, M.P., Park, J., Hong, M., Butcher, R.A., Kim, K., Sengupta, P. Feeding state-dependent regulation of developmental plasticity via CaMKI and neuroendocrine signaling. *eLife*, 10110. PMID: PMC4558564, 2015.

Obata, F., Kuranaga, E., Tomioka, K., Ming M., **Takeishi, A.**, Chen, C.H., Soga T., Miura, M., “Necrosis-driven systemic immune response alters SAM metabolism through the FOXO-GNMT axis” *Cell Reports*, 7, 821-833 (2014).

Takeishi, A., Kuranaga, E., Tonoki, A., Misaki, K., Yonemura, S., Kanuka, H., Miura, M. “Homeostatic epithelial renewal in the gut is required to dampen a fatal systemic wound response in *Drosophila*” *Cell Reports*, 3, 919-930 (2013).

Kamiya, M., Asanuma, D., Kuranaga, E., **Takeishi, A.**, Sakabe, M., Miura, M., Nagano, T., Urano, Y. “ β -Galactosidase Fluorescence Probe with Improved Cellular Accumulation Based on a Spirocyclized Rhodol Scaffold.” *J. Am. Chem. Soc.* *133*, 12960-12963 (2011).

Asuka Takeishi, Erina Kuranaga, Masayuki Miura. “Sensing and reacting to dangers by caspases: Caspase activation via Inflammasomes. *Drug Discoveries & Therapeutics*, 2:14-23, (2008)

International Conferences:

[Oral Presentations]

Takeishi, A., Yeon, J., Harris, Sengupta, P. Neuronal mechanisms that drive starvation-dependent thermotaxis plasticity in *C. elegans*, 線虫の飢餓依存的な温度走行性を制御する神経メカニズムの解明. The 43th Annual Meeting of the Molecular Biology Society of Japan (Dec., 2020, Zoom)

武石 明佳, ‘線虫を用いた行動決定メカニズムの解明’, 第12会若手インスパイアシンポジウム, 2020, 東京

Takeishi, A., ‘Neural Communication that Mediates Starvation-dependent Thermotaxis Plasticity in *C. elegans*’, NSI workshop 2019, 2019, 名古屋

Takeishi, A., Yanxun, Y.V., Hapiak, V.M., Bell, H.W., Sengupta, P., AFD-specific receptor guanylyl cyclases confer thermosensory responses, CeNeuro2016 (June 2016, Nagoya, Japan)

Takeishi, A., Yanxun, Y.V., Hapiak, V.M., Bell, H.W., Sengupta, P., AFD-specific receptor guanylyl cyclases can confer temperature responses onto diverse cell types, 20th International *C. elegans* Meeting (June 2015, Los Angeles, USA)

Takeishi, A., Kuranaga, E., Tonoki, A., Kanuka, H., Miura, M. “Caspase activity in gut mediates systemic response against tissue damage” 2012 *Drosophila* Research Conference (March, 2012, Chicago, USA)

Takeishi, A., Kuranaga, E., Tonoki, A., Kanuka, H., Miura, M. “The regulation of systemic response *via* caspase pathway to overcome tissue damage” The Tissue Repair & Regeneration Gordon-Kenan Research Seminar (June, 2011, NH, USA)

Takeishi, A. “Injury Induced Defense Mechanism via caspase” Homeostatic inflammation Workshop for Young Scientists (January, 2011, Yamagata, Japan)

Takeishi, A., Kuranaga, E., Tonoki, A., Kanuka, H., Miura, M. “Involvement of caspase pathway in the response against tissue injury” The 82nd Annual Meeting of the Japanese Biochemical Society (May, 2009, Hyogo, Japan)

Takeishi, A., Kuranaga, E., Miura, M. “Analysis of Caspase activation in *Drosophila* during host defense” The 8th Awaji International Forum on Infection and Immunity (September, 2008, Hyogo, Japan)

[Poster Presentations]

Takeishi, A., Sengupta, P., “Molecular and neuronal mechanisms mediating starvation-dependent thermosensory behavioral plasticity” CeNeuro 2018. (July, 2018, WI, USA)

Takeishi, A., Sengupta, P., “Molecular and neuronal mechanisms underlying feeding state-dependent plasticity in thermotaxis behaviors”, 21st International *C. elegans* Meeting (June 2017, Los Angeles, USA)

Takeishi, A., Neal, J. S., Sengupta, P., “Molecular and neuronal mechanisms of feeding state-dependent thermotaxis behavioral plasticity”, CeNeuro2016 (June 2016, Nagoya, Japan)

Takeishi, A., Sengupta, P., “The AWC and ASI sensory neurons contribute to starvation-dependent plasticity in thermotaxis behavior” CeNeuro 2014. (July, 2014, WI, USA)

Takeishi, A., Sengupta, P., “The AWC and ASI sensory neurons contribute to starvation-dependent plasticity in thermotaxis behavior” Volen retreat. (October, 2014, MA, USA)

Takeishi, A., Sengupta, P., “Mechanism of starvation-dependent plasticity in thermotaxis behaviors in *C.elegans*” Volen retreat. (October, 2013, MA, USA)

Takeishi, A., Kuranaga, E., Tonoki, A. Misaki, K., Yonemura, S., Kanuka, H., Miura, M. “Gut cell turnover via caspase mediates systemic wound response” *Drosophila* Research conference 10. (October, 2012, Tokyo, Japan)

Takeishi, A., Kuranaga, E., Tonoki, A. Misaki, K., Yonemura, S., Kanuka, H., Miura, M. “Regulation of systemic wound response via caspase activity in gut” New Frontiers of Metabolism Research in Biomedical Sciences. (September, 2012, Tokyo, Japan)

Takeishi, A., Kuranaga, E., Tonoki, A., Kanuka, H., Miura, M. “Genetic analysis of the cell death signal in the response against tissue injury” 13th international TNF conference (May, 2011, Hyogo, Japan)

Takeishi, A., Kuranaga, E., Tonoki, A., Kanuka, H., Miura, M. “Genetic dissection of tissue injury-induced cell death-related signaling in *Drosophila*.” 21st European *Drosophila* Research Conference (November, 2009, Nice, France)

Takeishi, A., Kuranaga, E., Tonoki, A., Kanuka, H., Miura, M. “Genetic Analysis of Defense Mechanisms against Tissue Injury” *Drosophila* Research Conference 9 (July, 2009, Shizuoka, Japan)

Takeishi, A., Kuranaga, E., Miura, M. “In vivo dynamics of caspase activation in *Drosophila* during host defense” The 15th Takeda Science Foundation Symposium on Bioscience (December, 2008, Tokyo, Japan)

Takeishi, A., Kuranaga, E., Miura, M. “Live imaging analysis of caspase activity during the defense response.” The University of Tokyo LSN Symposium 2008 (September, 2008, Tokyo, Japan)

Takeishi, A., Kuranaga, E., Miura, M. “Live Imaging of the Caspase Activity during the Wound Healing” The 7th International Cell Death Society Symposium (June, 2008, Shanghai, China)

Takeishi, A., Kuranaga, E., Miura, M. “Live Imaging of the Caspase Activity during the Wound Healing” The 8th Meeting of Japanese *Drosophila* Research Conference (September, 2007, Hyogo, Japan)

Memberships

2015-present The Genetics Society of America

2009-2012 The Japanese Biochemical Society