



Full name with degree: Miki Ii, Ph.D.

Rank: Assistant Professor

Position: Faculty

Department: Biological Sciences

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Education:

- **Ph.D.:** Molecular Biology, Kyushu University, Japan
- **M.S.:** Biology, Kagoshima University, Japan
- **B.S.:** Biology, Kagoshima University, Japan

Research Interests:

- *Aicardi-Goutieres* Syndrome (AGS), an inherited severe neurological disorder in humans
- Stress Response (cold tolerance, no/low oxygen tolerance- anoxia/hypoxia)
- Aging
- Memory and Learning
- Virus Infection
- *C. elegans* (nematode) disease model

Brief, Non-technical Description of Research (for layperson):

My lab is focused on how ribonucleases contribute to development and maintenance of healthy neurons. We use nematode to understand the basic mechanisms of neurogenesis and neurodegeneration, as well as stress responses regulated by neurons. We are also looking into the novel treatments to improve neuronal defects and slow down aging using the mutant worms and high-throughput drug screening. Other projects include aging, memory and learning, and virus infection.

Selected Recent Publications (3):

- Tomoyo Ujisawa, Akane Ohta, Tatsuya Ii, Yohei Minakuchi, Atsushi Toyoda, Miki Ii, Atsushi Kuhara (2018). Endoribonuclease ENDU-2 regulates multiple traits including cold tolerance via cell autonomous and nonautonomous controls in *C. elegans*. *Proc. Natl. Acad. Sci. U.S.A.* **115**, 8823- 8828 [PMID:30104389]
- Miki Ii*, Tatsuya Ii, Larisa I. Mironova and Steven J. Brill (2011). Epistasis analysis between homologous recombination genes in *Saccharomyces cerevisiae* identifies multiple repair pathways for Sgs1, Mus81-Mms4 and RNase H2. *Mutat. Res.*, **714**, 33-43. [PMID:21741981] (*corresponding author)
- Miki Ii*, Tatsuya Ii, and Steven J. Brill (2007). Mus81 functions in the quality control of replication forks at the rDNA and is involved in the maintenance of rDNA repeat number in *Saccharomyces cerevisiae*. *Mutat. Res.*, **625**, 1-19. [PMID: 17555773] (*corresponding author)

Recent Courses Taught:

- Anatomy and Physiology I (BIOL 207); Anatomy and Physiology II (BIOL 208)
- Human Anatomy (BIOL 370); Principles of Physiology (BIOL 307)

Keywords (4-6): neurodegeneration, aging, stress response, memory and learning, antiviral response

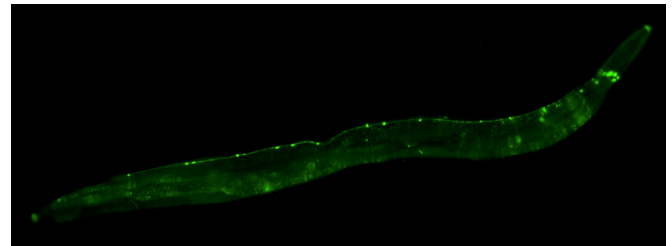


Photo: GFP-labeled GABAergic neurons in *C. elegans* (courtesy of the Ii lab)