Emiri Watanabe （渡邊 絵美理）

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Graduate School of Science, University of Tokyo.

Work Experience

The University of Tokyo
Graduate School of Science
Apr 2024 – Present
Tokyo, Japan

- Project Assistant Professor
- Adviser: Prof. Shinya Kuroda

Education

The University of Tokyo
Graduate School of Frontier Sciences, Department of Complexity Science and Engineering
Apr 2021 – Mar 2024
Chiba, Japan

- Ph.D. in Science.
- Supervisor: Prof. Hiroshi Kori
- Thesis: "Theoretical and experimental studies on dynamics and structure in populations of biological oscillators"

Kyoto University
Graduate School of Science, Department of Biological Science
Apr 2019 – Mar 2021
Kyoto, Japan

- M.S. in Science.
- Supervisor: Prof. Tokitaka Oyama

Kyoto University
Faculty of Science
Apr 2015 – Mar 2019
Kyoto, Japan

- B.S. in Science.
- Supervisor: Prof. Tokitaka Oyama

Research Visitation

Universitat Pompeu Fabra
Department of Medicine and Life Sciences
Mar 2023 – Aug 2023
Barcelona, Spain

- Adviser: Prof. Jordi Garcia-Ojalvo

Publication

Watanabe, E., Isoda, M., Muranaka, T., Ito, S., & Oyama, T. (2021). Detection of uncoupled circadian rhythms in individual cells of *Lemnna minor* using a dual-color bioluminescence monitoring system. *Plant and Cell Physiology*, *62*(5), 815–826. https://doi.org/10.1093/pcp/pcab037

Watanabe, E., Muranaka, T., Nakamura, S., Isoda, M., Horikawa, Y., Aiso, T., Ito, S., & Oyama, T. (2023). A non-cell-autonomous circadian rhythm of bioluminescence reporter activities in individual duckweed cells. *Plant Physiology*, *193*(1), 677–688. https://doi.org/10.1093/plphys/kiad218

Grants

Research Fellowships for Young Scientists (DC1)
Japan Society for the Promotion of Science
Apr 2021 – Mar 2024
¥2,200,000

Awards

MBSJ2022 Science Pitch Award
The 45th Annual Meeting of the Molecular Biology Society of Japan
Dec 2022

Presentation

International conferences

1. **Emiri Watanabe**, Shogo Ito, and Tokitaka Oyama
   "Uncoupled cellular circadian rhythms of a duckweed plant detected by a dual-color bioluminescence monitoring system"
   85th Cold Spring Harbor Laboratory Symposium on Quantitative Biology: Biological Time Keeping
   Virtual, June 2021 (poster presentation, refereed)

Domestic conferences

1. **Emiri Watanabe**, Tomoaki Muranaka, Shunji Nakamura, Minako Isoda, Yu Horikawa, Tsuyoshi Aiso, Shogo Ito, Tokitaka Oyama
   "A non-cell-autonomous circadian rhythm in duckweed plant"
   Symposium "Future Direction of Circadian Clock Research from the Viewpoint of Diverse Rhythmic Phenomena"
   The 61st Annual Meeting of the Biophysical Society of Japan
   Nagoya, November 2023 (symposium)
2. **Emiri Watanabe**, Tomoaki Muranaka, Shunji Nakamura, Minako Isoda, Shogo Ito, Tokitaka Oyama
   "A non-cell-autonomous rhythm uncoupled from the cellular circadian oscillator of individual cells in plant"
   The 28th Annual Meeting of the Japanese Society for Chronobiology
   Tochigi, December 2022 (symposium, poster)
3. **Emiri Watanabe**, Hiroshi Kori
   "Estimating natural frequency variation and coupling strength from time series of synchronization level in coupled oscillators"
   The 45th Annual Meeting of the Molecular Biology Society of Japan
   Chiba, November 2022 (poster, science pitch)
   (MBSJ2022 Science Pitch Award)
4. **Emiri Watanabe**, Hiroshi Kori
   "Estimating model parameters from time series of order parameter in weakly coupled oscillators"
   The 2022 Annual (77th) Meeting of the Physical Society of Japan
   Virtual, March 2022 (oral presentation)
5. **Emiri Watanabe**, Hiroshi Kori
   "Dependence of desynchronization process on the frequency distribution and coupling strength in a population of phase oscillators"
   The 28th Annual Meeting of the Japanese Society for Chronobiology
   Okinawa, November 2021 (poster presentation)
6. **Emiri Watanabe**, Shogo Ito, and Tokitaka Oyama
   "Analysis on the behavior of uncoupled circadian rhythms detected by a dual-color bioluminescence monitoring system in duckweed plant"
   The 62nd Annual Meeting of the Japanese Society of Plant Physiologists
   Virtual, March 2021 (oral presentation)
7. **Emiri Watanabe**, Shogo Ito, and Tokitaka Oyama
   "Uncoupled circadian rhythms in individual cells observed in *Lemna minor*"
   The 27th Annual Meeting of the Japanese Society for Chronobiology
   Virtual, September 2020 (poster presentation)
8. **Emiri Watanabe**, Shogo Ito, and Tokitaka Oyama
   "Monitoring uncoupled circadian rhythms in individual cells of duckweed by co-transfection of luciferase reporters with different colors"
   The 61st Annual Meeting of the Japanese Society of Plant Physiologists
   Osaka, March 2020 (poster presentation) (※ The conference was cancelled due to the spread of COVID-19.)
9. **Emiri Watanabe**, Shogo Ito, and Tokitaka Oyama
   "Detection of uncoupled circadian rhythms in individual cells of *Lemna minor* by a dual-color bioluminescence monitoring system"
   The 26th Annual Meeting of the Japanese Society for Chronobiology
   Kanazawa, October 2019 (poster presentation)
10. **Emiri Watanabe**, Shogo Ito, and Tokitaka Oyama
    "A dual-color bioluminescence reporter system to simultaneously monitor expression levels of two genes in plant cells"
    The 60th Annual Meeting of the Japanese Society of Plant Physiologists
    Nagoya, March 2019 (poster presentation)