



Postdoctoral Research on
Plant Evolutionary Biochemistry and Synthetic Biology
at University of Wisconsin-Madison



Hiroshi Maeda Laboratory at University of Wisconsin-Madison is seeking a highly motivated, self-driven postdoctoral researcher, who are interested in working on **plant evolutionary biochemistry and synthetic biology** of aromatic amino acid biosynthesis and the nitrogen metabolic network.

The Maeda lab explores **evolutionary diversification of plant primary metabolic enzymes and pathways** as well as their regulation using various plant species. We further apply our basic discoveries to **redesign plant metabolism** and produce beneficial compounds directly from CO₂ using plants as chassis. We take a multi-disciplinary approach that integrates phylogenomics, genetics, and molecular biology, as well as various biochemical analyses, including metabolomics, high-throughput enzyme assays, and ¹³C and ¹⁵N stable isotope-labeled metabolic tracer experiments. Our ultimate goal is to build plant chemical production platforms that can efficiently synthesize high-value aromatic chemicals in a sustainable manner.

A highly-motivated researcher interested in enzyme biochemistry and evolution, metabolic regulation, and plant synthetic biology are encouraged to apply. A prior experience in protein expression and purification, enzyme characterization, and/or metabolite analysis is a plus but not required. Strong skills in critical thinking, time management, and oral and written presentation and communication are essential. The selected candidate will be also involved in various national and international collaborations, mentor undergraduate students, and participate in public outreach events that the Maeda lab regularly runs on and off campus.

The Maeda lab believes that diversity drives innovations. We are committed to bring in members from diverse backgrounds and to foster collaborations among diverse students and scientists. Madison is the capital city of Wisconsin, known as a family-friendly yet, vibrant town surrounded by multiple lakes.



The starting date is flexible and anytime within the next one and half year. Please send your application to <maeda2@wisc.edu> as a *single PDF file* containing i) cover letter, ii) CV, and iii) 2 to 3-page research statement explaining your research interest, potential project ideas, and future career goals, and why the Maeda lab is of interest to you. Also, please indicate in your CV the names of at least three referees, who may be contacted for a reference letter.

Related articles:

Koper et al. (2024) [PNAS online](#), [bioRxiv doi: 10.1101/2024.03.19.585368](#)

Jung and Maeda (2024) [Plant Physiol. kiae166](#)

EI-Azaz et al. (2023) [Nat. Commun. 14, 7242](#)

Yokoyama et al. (2022) [Sci. Adv. 8, eabo3416](#)

For more information please visit the Maeda Lab website <<https://maeda.botany.wisc.edu>> or find us at the 2024 ASPB meeting in Hawaii!

