



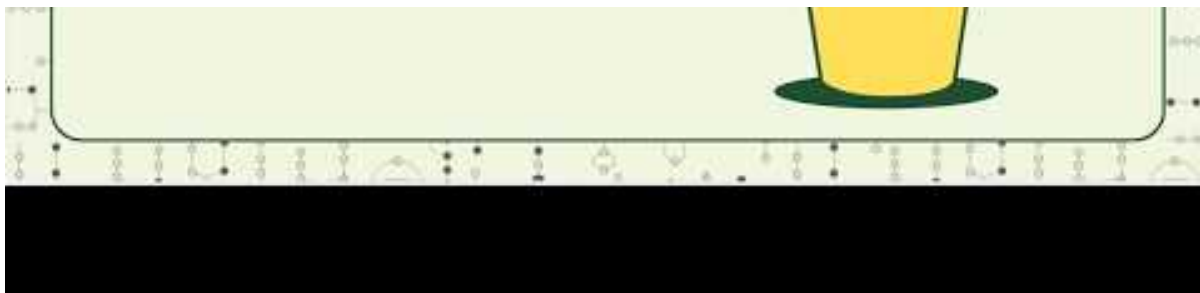
The Plant Metabolic Network (PMN) is your go-to resource for curated metabolic pathway data, genome annotations, and analysis tools that support plant research and enhance understanding of plant metabolism. This newsletter will keep you informed about the latest developments, events, and resources from PMN, including database updates, feature enhancements, tutorials, workshops, and research highlights.

Watch Now: *What is the Plant Metabolic Network* YouTube Video

Discover what the [Plant Metabolic Network \(PMN\)](#) is all about in our new introduction video! Learn how PMN brings together curated data on plant metabolism—from genes to pathways—to support research, education, and innovation.

Click below to watch!





Are you interested in building a genome-scale metabolic pathway database for your species of interest?

Click below to get started!

[Start Building](#)

PMN at PSNA

We are excited to announce that PMN is a sponsor at this year's Annual Meeting of the Phytochemical Society of North America (PSNA)!

You can meet us during PSNA at our booth where we invite researchers to contribute their enzyme data to PMN's database!





Members of PMN will be actively contributing to this year's PSNA meeting in a variety of roles:

Philipp Zerbe - Confirmed Speaker

Hiroshi Maeda - Discussion Leader for the Plenary talk on Monday, June 15 and Meeting Organizer

Gabrielle Wyatt - Poster Presenter

Farida Yasmin - Poster Presenter

Important dates:
Early meeting registration is now open until April 15, 2026
Abstract submission is now open!
 2nd round of student/postdoc Travel Awards before April 1, 2026

Tentative scientific topics:
 Natural product chemistry and artificial intelligence (A.I.)
 Chemical ecology and phytochemical functions
 Primary and specialized metabolic pathway discovery and evolution
 Plant-derived nutrition and medicine for human health
 Ethnobotany and indigenous medicinal uses
 Plant synthetic biology for plant-based chemical production

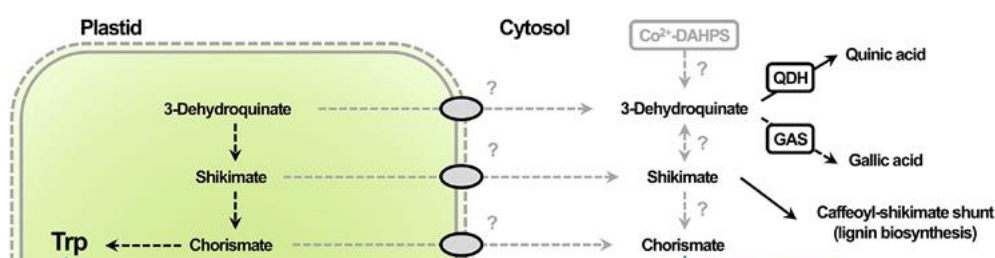
Workshops:
 A.I. integration into phytochemical research
 Career workshops for both academic and non-academic jobs
 Discoveries to commercialization

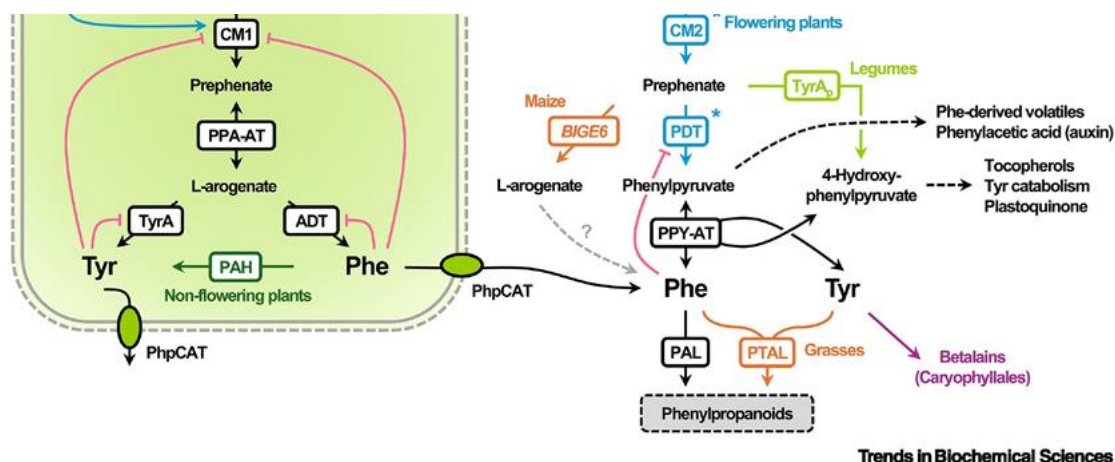
Confirmed Speakers

Discussion leaders

[Click Here For More Information on PSNA](#)

Publication Spotlight





The multilayered regulation of aromatic amino acid biosynthesis in plants

Jorge El-Azaz and Hiroshi A. Maeda

Published: December 2025

Abstract: The shikimate and aromatic amino acid (AAA) biosynthetic pathways are crucial for the production of L-phenylalanine (Phe), L-tyrosine (Tyr), and L-tryptophan (Trp), as well as vitamins, hormones, and an array of plant natural products, including lignin, a major reservoir of organic carbon on Earth. In this review, we summarize recent advances in the mechanisms that dynamically regulate the AAA biosynthetic pathways of plants, with a particular focus on Phe biosynthesis due to its central role as a precursor to phenylpropanoids. The integration of AAA biosynthesis with upstream and downstream plant metabolism is also discussed, as well as how this fundamental knowledge can inform the bioengineering of plant-based platforms for sustainable production of AAA-derived natural products.

[Read The Publication Here](#)

PMN at Recent Events

Where We Were: [Plant and Animal Genome \(PAG\) Conference](#)

When: January 9-14, 2026

Who Was There: Philipp Zerbe

Dr. Philipp Zerbe gave a talk on *Investigating Plant Terpenoid Metabolism toward Crop*

and Bioproduct Applications

Where We Were: [Chemical Biology Innovation Group at the University of California, Davis](#)

When: January 21, 2026

Who Was There: Farida Yasmin

Dr. Farida Yasmin gave a talk on *1-5 Rings to Rule Them All: Discovery and Engineering of Plant Terpenoid Metabolism*.

Where We Were: [Real Christmas Tree Board Webinar Series](#)

When: January 22, 2026

Who Was There: Philipp Zerbe

Dr. Philipp Zerbe gave a virtual talk on *Christmas Tree Genetic Improvement Through Identification of Stress Defense Mechanisms*.

Where We Were: [University of Chicago Institute for Biophysical Dynamics](#)

When: February 17, 2026

Who Was There: Sue Rhee

Dr. Sue Rhee presented a talk on *Understanding and engineering drought resilience in sorghum using modeling and single-cell omics*.

PMN at Upcoming Conferences

Where We Will Be: [2026 Salt and Water Stress in Plants Gordon Research Conference](#)

When: May 24-29, 2026

Who Will Be There: Sue Rhee

Dr. Sue Rhee will present a talk on *Understanding and engineering drought resilience in sorghum using modeling and single-cell omics*.

Where We Will Be: [The American Society of Plant Biologists \(ASPB\) Conference](#)

When: July 18-22, 2026

Who Will Be There: Sue Rhee and Gabrielle Wyatt

Dr. Sue Rhee will be attending and Gabrielle Wyatt will be presenting a poster.

Outreach



Charles Hawkins (left) leads a student in the PMN activity at Glencairn Science Night.

Glencairn Elementary School's Science Night

This month, PMN Director Charles Hawkins led one of our favorite activities at Glencairn Elementary School's Science Night in East Lansing, MI! Students explored how metabolism creates the pleasant aromas of bananas & other fruits, discovering through a hands-on activity how plant metabolism is what gives these fruits their signature scents.



Upcoming: [Michigan State University's Science Festival](#)

Every year, Michigan State University hosts a free, month-long celebration of science with events geared towards all ages. For the second year in a row, during the Science Festival's Steam Expo Weekend, there will be a room dedicated to plant science called 'The World of Plants.' PMN's Charles Hawkins and Gaëlle Cassin-Ross will be hosting a PMN booth in the World of Plants room to engage both kids and adults in learning about plant metabolism.

New PMN Member

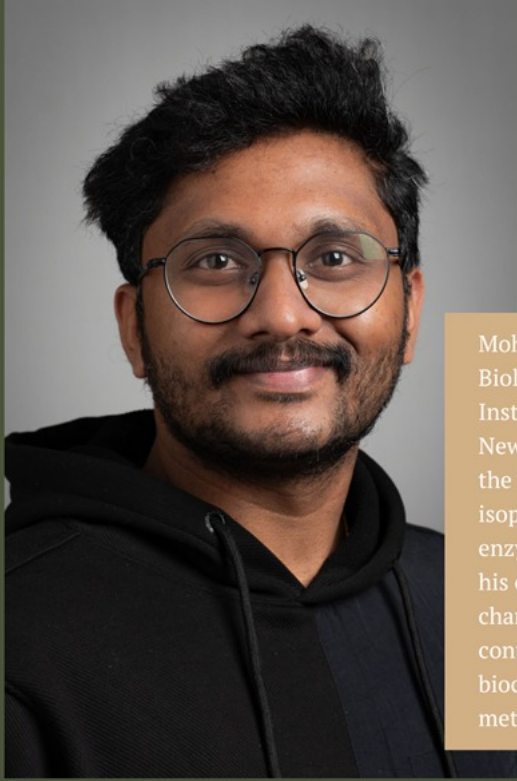
Mohan Varghese, Ph.D

University of Wisconsin-Madison

Join us in welcoming the newest member of PMN!

[Mohan Varghese, Ph.D](#) is joining the PMN team as a Postdoctoral Researcher with The Maeda Lab at the University of Wisconsin-Madison!

You can meet Mohan and the other members of the Maeda Lab at this year's PSNA Annual Meeting!



Mohan Varghese
Postdoctoral Researcher
University of Wisconsin-Madison
Maeda Lab

Mohan Varghese earned his Ph.D. in Plant Biology and Biotechnology from the National Institute of Plant Genome Research (NIPGR), New Delhi. His doctoral research focused on the biochemical regulation of isopropylmalate synthase (IPMS), a key enzyme in plant amino acid metabolism. In his current work, he focuses on characterising plant aminotransferases, contributing to the understanding of the biochemical pathways underlying nitrogen metabolic flux in plants.

[View the full PMN team here!](#)



National Science Foundation (Grant #: [2312181](#), [1546838](#), [1026003](#) and [0640769](#)) and the [Department of Energy](#) (BER Grant #: ER65472), governed by an [Editorial Board](#) composed of internationally renowned scientists, and executed at [Michigan State University](#)'s Department of [Biochemistry & Molecular Biology](#) and the [Plant Resilience Institute](#).

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