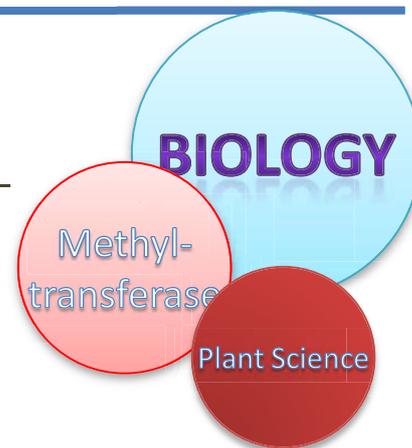


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■ Researcher information

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Major

Plant Physiology, Secondary metabolism, Biosynthesis of purine alkaloid,

■ Research topics

Function and regulation of plant secondary metabolism

Keywords

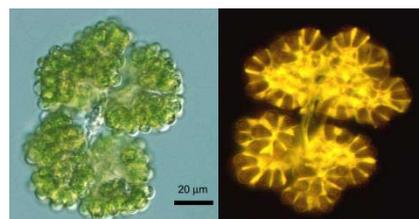
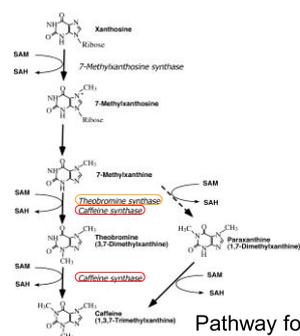
Methyltransferase, caffeine, alkaloid,, terpenoid,, metabolism,

Contents

■ Overview (background, goal, detail)

(1) We investigate the structure and function of *N*-methyltransferase involved in caffeine biosynthesis. The regulation in the expression of NMT genes isolated by our laboratory and the diversity of NMT genes are examined to clarify the contribution of NMT to the secondary metabolism in plants. Moreover, we investigate the subcellular transport of caffeine into vacuole.

(2) Our laboratory investigates the biochemical pathways involved in the production of hydrocarbon, the enzymes that catalyze them, and the genes that encode these enzymes. Genetic engineering of algae with such genes can result in the useful production of hydrocarbon.



Botryococcus braunii

Pathway for the biosynthesis of theobromine and caffeine in plants

Intellectual properties (Patents, computer programs), productization, publications and social/industrial contributions

Potential of social/industrial contribution

■ Joint research