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The catabolic system of lignin-derived aromatic compounds in Sphingobium lignivorans SYK-6 and its application to lignin valorization

Monday, October 14, 2024 4:50 PM (20 minutes)

This research group has investigated cultivation of marine microalgae using large outdoor ponds, and developed basic technologies for biomass production as well as valuable compound production. In addition, the group has obtained several candidate microalgal strains with superior carbon fixation capacity. In this study, we will select candidate strains that are available for biomass production and production of useful substances on a pilot scale. In order to maximize the material production potential of the microalgae, we will establish molecular engineering techniques and attempt to improve the biomass production potential. In addition, we aim to improve biomass productivity by constructing scale-up cultivation systems for each strain, and optimizing culture conditions according to the cultivation site. The goal is to achieve carbon sequestration of 50 t/ha/year or more.

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