

## Improving Microalgal Biomass Productivity with Algal Growth Promoting Bacteria

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Interests in the biofuels have recently been increasing, and biofuels from microalgae have become even more popular. In their natural habitats, microalgae grow with various microorganisms, some of which have symbiotic relationships with microalgae. For improving microalgal biomass productivity, co-cultivation of microalgae with symbiotic bacteria was investigated. Three bacterial species were isolated from the culture of a green microalga, *Tetraselmis* sp. KCTC12236BP. *Tetraselmis* sp. KCTC12432BP was co-cultivated with the each bacteria in Erlenmeyer flasks at 20°C using three fold f/2-Si medium. For 8 days, the overall microalgal biomass productivity of *Tetraselmis* sp. was in the order of culture with strain A, B, C, and the pure algal culture. When *Tetraselmis* sp. was co-cultivated with the strain C, microalgal biomass productivity was increased by 76% in comparison to cultivation of pure *Tetraselmis* sp. Strain C showed the greatest microalgal growth promoting effect among the three bacteria. A better understanding of interactions between microalgae and symbiotic bacteria will lead to a more economical commercial, large-scale microalgal cultivation.