

Development of synthetic microbial consortium for efficient production of 3-hydroxypropionic acid from carbon monoxide

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Microbial fermentation to convert carbon monoxide into desired biofuels or value-added biochemicals is a promising approach to recycle the carbon monoxide involved in by-product gas of industrial processes. Although bioconversion approach using single recombinant microorganism has been suggested, introduction of whole pathway for the conversion of carbon monoxide to the valuable products into single microorganism has been a major bottleneck. In this study, a novel microbial consortium for efficient production of 3-hydroxypropionic acid (3-HP) was designed and constructed by assembling *Escherichia coli* and *Eubacterium limosum* in anaerobic condition.