

### Enhanced butanol production by glycerol and glucose cofermentation using *Clostridium pasteurianum* mutant strain

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Butanol is significant industrial chemical which can be substituted for existing fuel. *Clostridium pasteurianum* is generally known as natural butanol producer utilizing glycerol. To improve butanol production, *C. pasteurianum* mutant strains were isolated by chemical mutagenesis and *C. pasteurianum* MBEL\_GLY2 was the best mutant strain which showed 17.8 g/l of butanol production using glycerol in batch fermentation. Followed by recent report, butanol production was increased by glycerol and glucose mixed fermentation. Here we will show the performance of the butanol production using MBEL\_GLY2 mutant strain and optimizing condition using co-fermentation in the conference. [ This work was supported by the Technology Development Program to Solve Climate Changes on Systems Metabolic Engineering for Biorefineries from the Ministry of Science, ICT and Future Planning (MSIP) through the National Research Foundation (NRF) of Korea (NRF-2012-C1AAA001-2012M1A2A2026556); and the Advanced Biomass R&D Center of Korea (NRF-2010-0029799) through the Global Frontier Research Program of the MSIP.]