

### Synthetic Biology-based engineering of *Corynebacterium glutamicum* for the Jet-fuel production

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We have focused on the production of jet-fuel precursors from biomass due to rising petroleum costs and environmental concerns and developed a microbial cell factory that enables to produce the possible candidates of a jet-fuel precursor. *Corynebacterium glutamicum* was engineered by introducing biofuel producing pathway constructed in the BioBrick-formatted expression vector systems. Heterologous target genes were synthesized and optimized to produce a precursor of jet fuel candidates. In addition, the effect of cultivation of *C. glutamicum* for the jet-fuel production was investigated for the higher-production. So, the jet-fuel production platform by engineered *C. glutamicum* could be useful to biofuels production application. This work was supported by the National Research Foundation of Korea Grant funded by the Korean Government (MEST) (2013, University-Institute cooperation program) and 'Creative Allied Program (CAP)' through the Korea Research Council of Fundamental Science and Technology (KRCF) and Korea Institute of Science and Technology (KIST).