

Engineering of *Corynebacterium glutamicum* for efficient utilization of galactose using adaptive laboratory evolution

조민수, 최재웅, 전은정, 정기준[†]
한국과학기술원
(kijeong@kaist.ac.kr[†])

Galactose rich in various biomass, is one of the useful fermentable sugars which has been used for the bacterial cultivation as a major carbon source. However, *Corynebacterium glutamicum* which is a workhorse for the industrial production of various biomolecules including amino acids, cannot utilize galactose. Here, we engineered *C. glutamicum* for the utilization of galactose and production of value-added biochemicals. We first constructed the Galactose assimilation pathways by introducing galactose utilizing operon from *E. coli*, and its ability for galactose utilization was improved using adaptive laboratory evolution. To the end, the engineered strains showed much improved cell growth and product production during the cultivation in Galactose-media as a sole Carbon source.