E. COLI PLASMIDS AND STRAINS FOR BIOFUEL SYNTHESIS

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pA5c-tesA, pA8c-tesA-mleuABCD, pE2k-alsS-ilvCD

Researchers used a standard restriction digestion cloning based on the Biobrick platform or Gibson assembly to construct the plasmids. E. coli DH10B was used for cloning. These plasmids were designed to increase branch chain fatty acid production.

Publication: Engineering *Escherichia coli* to produce branched-chain fatty acids in high percentages

pE8s-fadR, pBARk-tetA-rfp

Researchers used BglBrick and Golden Gate assembly methods to construct the plasmids.

The FFA biosensor plasmid pBARk-rfp contains a FFA-activated P_{AR} promoter 5′ of a red fluorescent protein gene. P_{AR} was replaced by the promoters P_{AR1}, P_{AR2} and P_{AR3} (which do not respond to FFA) in plasmids pBAR1k-rfp, pBAR2k-rfp and pBAR3k-rfp, respectively. The FFA biosensor and its controls were evaluated following a previously reported method. A Hill equation was used for data fitting.

Publication: Exploiting nongenetic cell-to-cell variation for enhanced biosynthesis