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## Recent Work

### Title

Flux Analysis of Biodiesel-Producing E. coli

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**Flux Analysis of Biodiesel-Producing *E. coli***

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Biofuel yields can be limited below their theoretical maximum because of pathway characteristics (e.g. lack of enzyme activity or unbalanced gene expression) or a lack of flux directed towards the synthesizing pathway. The goal of the Host Engineering directorate is to prevent the latter. A way to achieve this is to knock genes out in such a way that carbon flux gets channeled towards the desired pathway. In order to do that in a rational manner it is desirable to know the internal metabolic fluxes and have a way to predict the outcome of knockout experiments. Here we present a internal metabolic flux profiles for a biodiesel-producing *E. coli* measured through  $^{13}\text{C}$  metabolic flux analysis ( $^{13}\text{C}$  MFA) and knockout suggestions obtained through Flux Balance Analysis (FBA) constrained by  $^{13}\text{C}$  MFA flux measurements.

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