

BESC - Gene Deletion to Increase Ethanol Production in Clostridium Thermocellum

Disclosure Number

201603625

Technology Summary

Clostridium thermocellum can ferment lignocellulosic biomass to fuels and chemicals including ethanol, but metabolic engineering is needed to direct more substrate to ethanol. While previous work has targeted the elimination of acetate, lactate, formate, and hydrogen production, C. thermocellum still produces secreted amino acids as end products. To reach high ethanol yield, we will need to decrease the amount of secreted amino acids. This invention does just that, decreasing ammonium assimilation, decreasing amino acid production, and increasing ethanol production.

Inventor

GUSS, ADAM M
Biosciences Division

Licensing Contact

CALDWELL, JENNIFER T

UT-Battelle, LLC

Oak Ridge National Laboratory

Rm 137, Bldg 4500N6196

1 Bethel Valley Road

Oak Ridge, TN 37831

Office Phone: (865) 574-4180

E-Mail: CALDWELLJT@ORNL.GOV