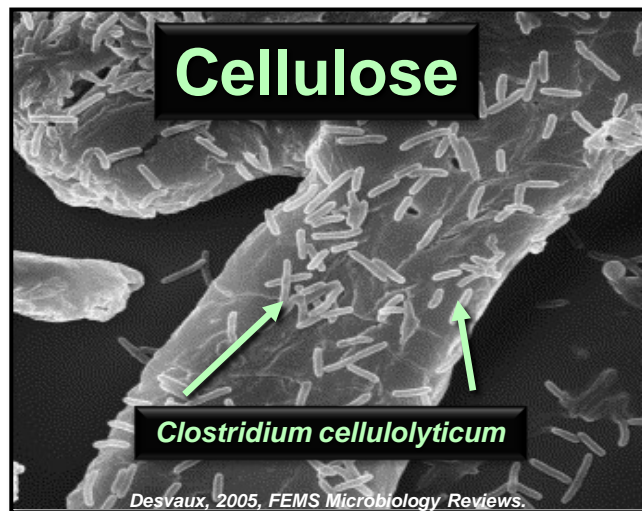
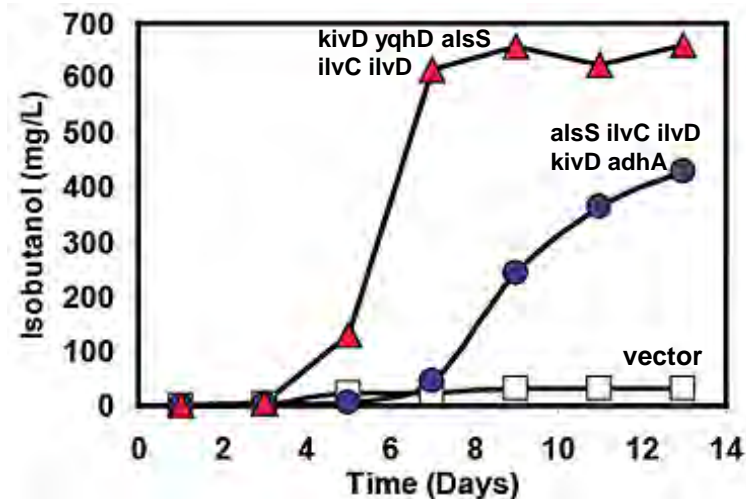


# Microbe engineered to produce isobutanol directly from cellulose

- BESC researchers engineered a native cellulose-degrading microbe, *Clostridium cellulolyticum*, to produce isobutanol.
- Demonstrating the ability to combine CBP (consolidated bioprocessing) with production of next generation biofuels.



***C. Cellulolyticum* growing on cellulose substrate**



**Isobutanol production on cellulose:  
Isobutanol pathway mutants vs. Vector control**

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