

Author's Accepted Manuscript

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www.elsevier.com/locate/ymben

PII: S1096-7176(13)00073-6
DOI: <http://dx.doi.org/10.1016/j.ymben.2013.08.003>
Reference: YMBEN813

To appear in: *Metabolic Engineering*

Cite this article as: Pratish Gawand, Patrick Hyland, Andrew Ekins, Vincent J.J. Martin, Radhakrishnan Mahadevan, Novel Approach to Engineer Strains for Simultaneous Sugar Utilization, *Metabolic Engineering*, <http://dx.doi.org/10.1016/j.ymben.2013.08.003>

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Novel Approach to Engineer Strains for Simultaneous Sugar Utilization

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Abstract

Use of lignocellulosic biomass as a second generation feedstock in the biofuels industry is a pressing challenge. Among other difficulties in using lignocellulosic biomass, one major challenge is the optimal utilization of both 6-carbon (glucose) and 5-carbon (xylose) sugars by industrial microorganisms. Most industrial microorganisms sequentially utilize glucose over xylose owing to the regulatory phenomenon of carbon catabolite repression (CCR). Microorganisms that can co-utilize glucose and xylose are of

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