Clean Technology

Microorganisms That Co-Consume Glucose With Non-Glucose Carbohydrates And Methods Of Use

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The Invention

Microorganisms that co-consume glucose with non-glucose carbohydrates, such as xylose, and methods of using same. The microorganisms comprise modifications that reduce or ablate the activity of a phosphoenolpyruvate (PEP):carbohydrate phosphotransferase system (PTS) protein or modifications that reduce or ablate the activity of a phosphoglucose isomerase and a GntR. The PTS protein may be selected from an enzyme I (EI), an HPr, an FPr, and an enzyme IIGlc (EIIGlc). Additional modifications include reduction or ablation of the activity of a pyruvate formate lyase, a lactate dehydrogenase, and a fumarate reductase and inclusion of recombinant pyruvate decarboxylase and alcohol dehydrogenase genes. The microorganisms are particularly suited to co-consuming glucose and xylose in media containing these substrates and producing ethanol therefrom.

Additional Information

For More Information About the Inventors

- Jennifer Reed

Tech Fields

- Clean Technology : Biobased & renewable chemicals & fuels

For current licensing status, please contact Jennifer Gottwald at jennifer@warf.org or 608-960-9854