Microorganisms And Methods For Producing 2-Pyrone-4,6-Dicarboxylic Acid And Other Compounds

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Inventors: Timothy Donohue, Jose Perez, Wayne Kontur, Daniel Noguera, German Umana Chapeton

The Invention

Recombinant microorganisms configured for enhanced production of compounds such as 2-pyrone-4,6-dicarboxylic acid (PDC) and methods of using the recombinant microorganisms for the production of these compounds. The recombinant microorganisms include one or more modifications that reduce 2-pyrone-4,6-dicarboxylic acid (PDC) hydrolase activity, 4-carboxy-2-hydroxy-6-methoxy-6-oxohexa-2,4-dienoate (CHMOD) cis-trans isomerase activity, 4-carboxy-2-hydroxy-6-methoxy-6-oxohexa-2,4-dienoate (CHMOD) methyl esterase activity, and/or vanillate/3-O-methylgallate O-demethylase activity. The recombinant microorganisms can be used to generate PDC from media comprising plant-derived phenolics, such as syringyl phenolics, guaiacyl phenolics, and p-hydroxyphenyl phenolics. The plant-derived phenolics can be derived from pretreated lignin, including depolymerized lignin or other chemically altered lignin.

Additional Information

For More Information About the Inventors

- Daniel Noguera
- Timothy Donohue

Publications

- Read a news story related to this technology.

Tech Fields

- Clean Technology : Biobased & renewable chemicals & fuels

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