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(54) **HOST CELLS AND METHODS FOR PRODUCING 3-METHYL-2-BUTEN-1-OL, 3-METHYL-3-BUTEN-1-OL, AND 3-METHYL-BUTAN-1-OL**

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(57) **ABSTRACT**

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The invention provides for a method for producing a 5-carbon alcohol in a genetically modified host cell. In one embodiment, the method comprises culturing a genetically modified host cell which expresses a first enzyme capable of catalyzing the dephosphorylation of an isopentenyl diphosphate (IPP) or dimethylallyl diphosphate (DMAPP), such as a *Bacillus subtilis* phosphatase (YhfR), under a suitable condition so that 5-carbon alcohol is 3-methyl-2-buten-1-ol and/or 3-methyl-3-buten-1-ol is produced. Optionally, the host cell may further comprise a second enzyme capable of reducing a 3-methyl-2-buten-1-ol to 3-methyl-butan-1-ol, such as a reductase.

Related U.S. Application Data

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