

Expression of cellobiose dehydrogenase from *Phanerochate chrysosporium* in *Pichia stipitis* for bioethanol production

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Lignocelluloseic biomass as feedstock for ethanol production mainly consists of cellulose and hemicellulose. Cellobiose dehydrogenase (CDH) is an extracellular enzyme produced by various wood-degrading fungi. It oxidises cellobiose from lignocellulose to fermentable sugars by a ping-pong mechanism using a wide spectrum of electron acceptors including quinones, phenoxyradicals, Fe^{3+} , Cu^{2+} and triiodide ion. In this study, new strain of *Pichia stipitis* was developed by overexpressing CDH gene from *Phanerochate chrysosporium* under the control of methanol inducible alcohol oxidase(AOXI) promoter. The maximum amount of ethanol produced was 5g/L using 50 g/L cellobiose as a carbon source.