Metabolic modeling and sensitivity analysis of ethanol production network in *Saccharomyces cerevisiae*

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Mathematical and computational methods are needed that can organize the available experimental information, and provide insight and guidance for successful metabolic engineering. In order to optimize the ethanol production in *Saccharomyces cerevisiae* a metabolic pathway of the ethanol production was constructed and analyzed. In this metabolic model the parameter sensitivity and parameter estimation were studied. Also dynamic model was proposed to predict its metabolic behavior.