

## Dynamic Modeling of Lactic Acid Fermentation Metabolism with *Lactococcus lactis*

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Lactic acid is one of popular organic acid because of its wide range of utility and applicability. Conventionally, lactic acid was mainly regarded as food additives or health care supplies. But in recent bio-industry, lactic acid is come into the spotlight because it can be used as intermediate to produce biodegradable polymer. Systems biotechnology technique is widely used for optimization of fermentation conditions and prediction of final product's yield. For these reasons, dynamic model of lactic acid fermentation using *Lactococcus lactis* is constructed. To construct kinetic model of lactic acid fermentation, metabolic kinetic parameters and enzyme concentrations are collected from BRENDA database and other literatures. Kinetic parameters of metabolic pathway are attained from KEGG database and literatures.