

P002 Metabolic pathways reconstruction by frequency and amplitude response to forced glycolytic oscillations in yeast
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Metabolic pathway kinetics models are generally restricted to approximations of systems of ordinary differential equations. One obvious reason is the complexity related to the evaluation of the parameters needed for a more complex approach to modelling. The work being shown here takes the glycolysis of yeast as an example for the application of a frequency and amplitude response method that is used to identify the model parameters.

It is shown that a single information-rich experiment at one resonant frequency is sufficient to optimise and refine a set of approximated parameters to build the appropriate model. To prove this, a known model is scanned by the method, and the parameter values of the reconstructed model are compared to the original ones.