Parameter estimation for simulation of glycolysis pathway by using an improved differential evolution

Abstract :

An improved differential evolution (DE) algorithm is proposed in this paper to optimize its performance in estimating the germane parameters for metabolic pathway data to simulate glycolysis pathway for Saccharomyces cerevisiae. This study presents an improved algorithm of parameter sensitivity test into the process of DE algorithm. The result of the improved algorithm is testifying to be supreme to the others estimation algorithms. The outcomes from this study promote estimating optimal kinetic parameters, shorter computation time and ameliorating the precision of simulated kinetic model for the experimental data.