Trehalose-6-phosphate synthase and stabilization of yeast glycolysis

Trehalose-6-phosphate synthase and stabilization of yeast glycolysis

‘Lost in transition: Startup of glycolysis yields subpopulations of nongrowing cells…’ (‘LIT’, van Heerden et al. 2014) is a massive paper from groups in Amsterdam and Delft, which deals with broad issues in metabolism and cell heterogeneity, as addressed for the predominant metabolic pathway, glycolysis, in the context of a long studied but incompletely understood yeast mutant which is impaired in use of glucose without evident direct defects in the pathway. The primary approach is the quite original one of predicting, for the mutant, the dynamics of metabolism upon glucose addition, based on a mathematical model using the known kinetics for the enzymes of the pathway. Here we will discuss this paper and provide some additional model simulations illuminating the model.

General information
State: Published
Organisations: Novo Nordisk Foundation Center for Biosustainability, Harvard Medical School
Contributors: Fraenkel, D., Nielsen, J.
Number of pages: 6
Publication date: 2016
Peer-reviewed: Yes

Publication information
Journal: Fems Yeast Research
Volume: 16
Issue number: 1
Article number:fov100
ISSN (Print): 1567-1356
Ratings:
BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 2.91 SJR 1.308 SNIP 0.787
Web of Science (2017): Impact factor 2.609
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 2.51 SJR 1.254 SNIP 0.855
Web of Science (2016): Impact factor 3.299
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 2.56 SJR 1.196 SNIP 0.741
Web of Science (2015): Impact factor 2.479
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 2.37 SJR 1.076 SNIP 0.831
Web of Science (2014): Impact factor 2.818
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 2.5 SJR 1.248 SNIP 0.863
Web of Science (2013): Impact factor 2.436
ISI indexed (2013): ISI indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): CiteScore 2.56 SJR 1.192 SNIP 0.841
Web of Science (2012): Impact factor 2.462
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): CiteScore 2.54 SJR 1.221 SNIP 1.018
Web of Science (2011): Impact factor 2.403
ISI indexed (2011): ISI indexed yes