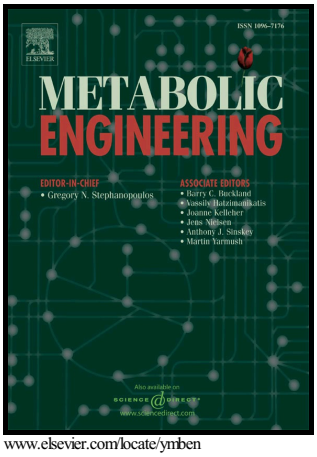

www.elsevier.com/locate/ymben

Heterologous transporter expression for improved fatty alcohol secretion in yeast

Yating Hu, Zhiwei Zhu, Jens Nielsen, Verena Siewers

PII: S1096-7176(17)30295-1
DOI: https://doi.org/10.1016/j.ymben.2017.11.008
Reference: YMBEN1317

To appear in: *Metabolic Engineering*

Received date: 21 August 2017
Revised date: 1 November 2017
Accepted date: 18 November 2017

Cite this article as: Yating Hu, Zhiwei Zhu, Jens Nielsen and Verena Siewers, Heterologous transporter expression for improved fatty alcohol secretion in yeast, *Metabolic Engineering,* https://doi.org/10.1016/j.ymben.2017.11.008

Heterologous transporter expression for improved fatty alcohol secretion in yeast

Yating Hu[a], Zhiwei Zhu[a, b], Jens Nielsen[a, b, c, d] and Verena Siewers[a, b *]

[a] Department of Biology and Biological Engineering, Chalmers University of Technology, SE-41296 Gothenburg, Sweden

[b] Novo Nordisk Foundation Center for Biosustainability, Chalmers University of Technology, SE-41296 Gothenburg, Sweden

[c] Novo Nordisk Foundation Center for Biosustainability, Technical University of Denmark, DK-2800 Kgs. Lyngby, Denmark

[d] Science for Life Laboratory, Royal Institute of Technology, SE-17121 Stockholm, Sweden

*Correspondence to: Verena Siewers: siewers@chalmers.se

Abstract

The yeast *Saccharomyces cerevisiae* is an attractive host for industrial scale production of biofuels including fatty alcohols due to its robustness and tolerance towards harsh fermentation conditions. Many metabolic engineering strategies have been applied to generate high fatty alcohol production strains. However, impaired growth caused by fatty alcohol accumulation and high cost of extraction are factors limiting large-scale production. Here, we demonstrate that the use of heterologous transporters is a promising strategy to