

## How do yeast cells become tolerant to high ethanol concentrations? - DTU Orbit (09/11/2017)

### How do yeast cells become tolerant to high ethanol concentrations?

The brewer's yeast *Saccharomyces cerevisiae* displays a much higher ethanol tolerance compared to most other organisms, and it is therefore commonly used for the industrial production of bioethanol and alcoholic beverages. However, the genetic determinants underlying this yeast's exceptional ethanol tolerance have proven difficult to elucidate. In this perspective, we discuss how different types of experiments have contributed to our understanding of the toxic effects of ethanol and the mechanisms and complex genetics underlying ethanol tolerance. In a second part, we summarize the different routes and challenges involved in obtaining superior industrial yeasts with improved ethanol tolerance.

### General information

State: Published

Organisations: Novo Nordisk Foundation Center for Biosustainability, KU Leuven

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Number of pages: 6

Pages: 475-480

Publication date: 2016

Main Research Area: Technical/natural sciences

### Publication information

Journal: Current Genetics

Volume: 62

Issue number: 3

ISSN (Print): 0172-8083

Ratings:

BFI (2017): BFI-level 1

Web of Science (2017): Indexed yes

BFI (2016): BFI-level 1

Scopus rating (2016): CiteScore 3.3 SJR 1.174 SNIP 1.063

Web of Science (2016): Indexed yes

BFI (2015): BFI-level 1

Scopus rating (2015): SJR 1.077 SNIP 0.788 CiteScore 2.13

BFI (2014): BFI-level 1

Scopus rating (2014): SJR 1.075 SNIP 0.776 CiteScore 2.23

BFI (2013): BFI-level 1

Scopus rating (2013): SJR 0.897 SNIP 0.606 CiteScore 1.9

ISI indexed (2013): ISI indexed yes

BFI (2012): BFI-level 1

Scopus rating (2012): SJR 1.313 SNIP 0.779 CiteScore 2.47

ISI indexed (2012): ISI indexed yes

BFI (2011): BFI-level 1

Scopus rating (2011): SJR 1.217 SNIP 0.654 CiteScore 2.18

ISI indexed (2011): ISI indexed yes

BFI (2010): BFI-level 1

Scopus rating (2010): SJR 1.211 SNIP 0.689

Web of Science (2010): Indexed yes

BFI (2009): BFI-level 1

Scopus rating (2009): SJR 1.377 SNIP 0.588

BFI (2008): BFI-level 1

Scopus rating (2008): SJR 1.592 SNIP 0.657

Scopus rating (2007): SJR 1.545 SNIP 0.722

Scopus rating (2006): SJR 1.347 SNIP 0.704

Scopus rating (2005): SJR 1.426 SNIP 0.773

Web of Science (2005): Indexed yes

Scopus rating (2004): SJR 1.393 SNIP 0.832

Web of Science (2004): Indexed yes

Scopus rating (2003): SJR 1.043 SNIP 0.628

Scopus rating (2002): SJR 1.127 SNIP 0.687

Web of Science (2002): Indexed yes

Scopus rating (2001): SJR 1.288 SNIP 0.615

Scopus rating (2000): SJR 1.375 SNIP 0.684

Web of Science (2000): Indexed yes

Scopus rating (1999): SJR 1.416 SNIP 0.713

Original language: English

Biofuel, Ethanol tolerance, Fermentation, *Saccharomyces cerevisiae*

DOIs:

10.1007/s00294-015-0561-3

Source: FindIt

Source-ID: 2290395097

Publication: Research - peer-review › Journal article – Annual report year: 2016