

## The Uses and Future Prospects of Metabolomics and Targeted Metabolite Profiling in Cell Factory Development - DTU Orbit (12/08/2016)

### The Uses and Future Prospects of Metabolomics and Targeted Metabolite Profiling in Cell Factory Development

The development of cell factories for the production of chemicals has traditionally relied on measurements of product metabolite titers to assess the performance of genetically manipulated strains. With the development of improved metabolomics and targeted metabolite profiling methods, these broader measurements of the cellular metabolic state are now becoming part of the toolbox used to characterize cell factories. In this review we briefly summarize the benefits and challenges of global metabolomics and targeted metabolite profiling methods and discuss the application of these methods in both pathway discovery and cell factory engineering. We focus particularly on exploring the potential of global metabolomics to complement more traditional targeted methods. We conclude the review by discussing emerging trends in metabolomics and how these developments can aid the engineering of better cell factories in the future.

#### General information

State: Published

Organisations: Novo Nordisk Foundation Center for Biosustainability, CFB - Core Flow

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Pages: 196-202

Publication date: 2013

Main Research Area: Technical/natural sciences

#### Publication information

Journal: Industrial Biotechnology

Volume: 9

Issue number: 4

ISSN (Print): 1550-9087

Ratings:

BFI (2015): BFI-level 1

Scopus rating (2015): 0.345 0.322

BFI (2014): BFI-level 1

Scopus rating (2014): 0.395 0.385

BFI (2013): BFI-level 1

Scopus rating (2013): 0.421 0.425

ISI indexed (2013): ISI indexed no

BFI (2012): BFI-level 1

Scopus rating (2012): 0.384 0.488

ISI indexed (2012): ISI indexed no

BFI (2011): BFI-level 1

Scopus rating (2011): 0.323 0.607

ISI indexed (2011): ISI indexed no

BFI (2010): BFI-level 1

Scopus rating (2010): 0.253 0.557

BFI (2009): BFI-level 1

Scopus rating (2009): 0.402 0.518

BFI (2008): BFI-level 1

Scopus rating (2008): 0.412 0.478

Scopus rating (2007): 0.286 0.376

Original language: English

DOIs:

10.1089/ind.2013.0008

Source: dtu

Source-ID: n::oai:DTIC-ART:swets/390904238::31385

Publication: Research - peer-review › Journal article – Annual report year: 2013