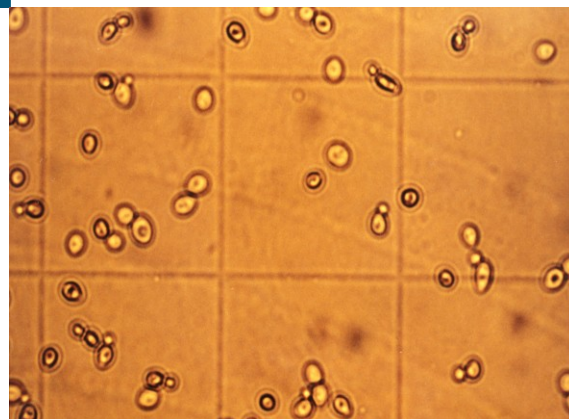


Yest strain capable of producing medium chain fatty acids

Description

The Enzyme molecular engineering and catalysis team from LISBP which is a mixed research unity (UMR) of INRA, INSA Toulouse and CNRS has developed a method to increase the proportion of medium chain fatty acids produced by yeast.

This method is based on molecular modeling approaches on the enzyme responsible of fatty acid biosynthesis (Fatty acid Synthase). The chain length can vary between C14 and C18 with a possible modulation in the fatty acid profile.



Type of expected transfer

Collaboration by patent license or license option with a R&D validation program.

Advantages

Reproducibility of the method

Variation in chain length between C14 and C18

Oleaginous yeast is capable of accumulating large amounts of fatty acids

These yeast are graded as GRAS and used for other industrial processes

Possible applications

The possible applications are part of the Oleochemistry applied to:

Fine chemistry
Energy

The research team would like to focus on a more accurate target with a partner to aim a concrete application.

Key words

fatty-acids, C14-C18, lipids, micro-organisms, FAS, metabolism, oleochemistry, energy, chemistry

TRL Scale

1 2 3 4 5 6 7 8 9

Development level

At this step, the engineered strain are able to accumulate 13% of their dry cell weight in lipids. The team is opened to consider other targets such as shorter fatty acids.

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