

IMPROVEMENTS TO PRODUCING BIOFUEL FROM CYANOBACTERIA

Tech ID: 24141 / UC Case 2014-177-0

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	10,385,310	08/20/2019	2014-177

BRIEF DESCRIPTION

Generating fuel and chemicals from the photosynthesis of cyanobacteria has great potential – especially in comparison to other approaches to producing biofuels. However, improving the efficiency of the cyanobacteria photosynthetic process is necessary to lowering the production costs of the resulting biofuel – so that it is more cost-competitive with conventional fuels.

To address this opportunity, researchers at the University of California, Berkeley have developed a novel approach to improving the photosynthetic efficiency of cyanobacteria. This Berkeley innovation is based on minimizing the phycobilisome light-harvesting antenna, and it has shown an increase in the saturation of photosynthesis by a factor of about two. This increase in efficiency in a population of cells would decrease the cost associated with producing isoprene, beta-phellandrene, and other chemicals from cyanobacteria photosynthesis.

SUGGESTED USES

- » Production of biofuels and other chemicals from the photosynthesis of cyanobacteria

ADVANTAGES

This is enabling technology that increases the photosynthetic productivity of cyanobacteria, and therefore it will lower the cost of producing isoprene, beta-phellandrene and other chemicals from the photosynthesis of cyanobacteria.

RELATED MATERIALS

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- Improved Generation of Terpene and Other High-Value Bioproducts from Cyanobacteria and Microalgae

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INVENTORS

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OTHER INFORMATION

CATEGORIZED AS

- » **Biotechnology**
- » Genomics
- » Industrial/ Energy
- » Proteomics
- » **Energy**
- » Bioenergy

RELATED CASES

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