

DEINOCOCCUS: AN « ALL-IN-ONE » BACTERIUM

NOW MATCHING THE BEST BIOMASS DEGRADERS

- DEINOVE has now optimized *Deinococcus* strains to hydrolyze cellulose very efficiently.
- As a reminder, these same bacteria produce ethanol at an unmatched level.
- By demonstrating the dual efficacy of its *Deinococcus* bacteria, DEINOVE holds all the cards in order to implement its consolidated bioprocess.

Montpellier, 7 July 2014 - DEINOVE (Alternext Paris: ALDEI), a cleantech company that designs and develops a new generation of industrial processes based on *Deinococcus* bacteria, announces that it has developed strains with especially high performance cellulolytic properties.

DEINOVE's researchers have built a strain using its metabolic engineering platform capable of hydrolyzing cellulose as fast as the reference microorganism, *Trichoderma reesei*. In fact, DEINOVE has been able to demonstrate that their engineered *Deinococcus* has the ability to hydrolyze crystalline cellulose (paper) in approximately 7 days, similar to *Trichoderma reesei*, a filamentous fungus commonly used to produce many commercial cellulases that are used by many industries and companies. These cellulolytic properties of the DEINOVE strain, coupled with its natural xylanolytic properties, allow the optimization of sugar utilization from lignocellulosic biomass and a decrease in commercial enzymes usage, an important cost factor in the production processes.

These results confirm DEINOVE's progress within the field of second generation biofuels. Additionally, they represent a major proof of concept opening a path towards the production of other molecules of interest for industrial purposes such as isoprenoids, solvents... Indeed, not only can *Deinococcus* degrade lignocellulosic biomass as powerfully as *Trichoderma reesei* but it can also valorize sugars issued from this hydrolysis into various compounds.

Rodney Rothstein, Professor at Columbia University Medical Center (USA) states: « *This is a major breakthrough as it foreshadows DEINOVE's ability to industrialize bi-functional organisms by leveraging their powerful metabolic engineering platform.* »

Nabil Sakkab, ex Senior Vice President of R&D at Procter & Gamble declares: « *The DEINOVE platform is gaining momentum; it is now able to swiftly produce multiple optimized Deinococcus variants, bringing to customers bacteria fitting their needs.* »

These results reinforce DEINOVE's ability to develop a unique consolidated bioprocess.

ABOUT DEINOVE

DEINOVE (Alternext Paris: ALDEI) is ushering in a new era of green chemistry by designing and developing new standards of production based on bacteria of untapped potential: the Deinococci. Taking advantage of the bacteria's unique genetic properties and unusual robustness, DEINOVE optimizes natural fermentation and metabolic capabilities of these bacterial "micro-factories" to produce high value-added products from non-food biomass. The Company's primary markets are 2nd-generation biofuels (DEINOL) and bio-based chemicals (DEINOCHEM). On these markets, the Company offers its technology to industrial partners globally.

Listed on NYSE Alternext since April 2010, DEINOVE was founded by Dr. Philippe Pouletty, General Partner of TRUFFLE CAPITAL, and Pr. Miroslav Radman, of the Faculty of Medicine of Paris Descartes University. The company employs over 40 people in its new offices and laboratories located in Montpellier, France.

More information at www.deinove.com

Contacts

DEINOVE

Emmanuel Petiot

CEO

Tel.: +33 (0) 4 48 19 01 28

emmanuel.petiot@deinove.com

Coralie Martin

Communication, Marketing and IR Manager

Tel.: +33 (0) 4 48 19 01 60

coralie.martin@deinove.com

ALIZE RP, Press relations

Caroline Carmagnol

Tel.: +33 (0) 1 70 22 53 90

Mobile: +33 (0) 6 64 18 99 59

caroline@alizerp.com

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