

## Press release

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### DEINOVE COMPLETES THE 2<sup>ND</sup> KEY MILESTONE OF ITS DEINOCHEM PROGRAM AND RECEIVES € 1.5 MILLION FROM ADEME

- ADEME has validated the 2<sup>nd</sup> key milestone of the DEINOCHEM program. Crossing this milestone was conditional on achieving deliverables confirming the progress made in the development of *Deinococcus* strains that are hyperproductive of isoprenoid compounds including carotenoids.
- Improved production yields represent a significant step in the commercialization process of these compounds.
- DEINOVE will receive approximately € 1.5 million.

Montpellier, 14 June 2016 – DEINOVE (Alternext Paris: ALDEI), an industrial biotech company developing innovative processes for producing biofuels and bio-based compounds by using *Deinococcus* bacteria as host strains, announces today that it has validated the 2<sup>nd</sup> key milestone of the DEINOCHEM program, dedicated to the production of biosourced isoprenoids, funded by ADEME (French Environment and Energy Management Agency) in the framework of the “Investments for the Future” programme launched by the French government.

The DEINOCHEM program aims to develop methods for producing compounds of industrial interest from renewable resources by optimizing the natural performance of *Deinococcus* bacteria. The first target molecules are part of the isoprenoid family (including carotenoids) that may lead to the production of specialty ingredients, such as antioxidants and / or high-added value pigments, representing a market of hundreds of millions of dollars worldwide in applications such as cosmetics, food, feed and health.

*“The DEINOCHEM program progresses according to plan and in line with the expectations of ADEME, but also with those of industrial partners,”* says Emmanuel PETIOT, CEO of DEINOVE. *“The tools we have implemented as part of this project clearly open up very promising opportunities in new areas of specialty chemicals with high-added value.”*

The DEINOVE teams are currently working on developing bacterial strains that are hyperproductive of carotenoids by fermentation. After a first key step focused on optimizing the construction of modified strains<sup>1</sup>, this second step has led to significant progress in:

- Sequencing and annotation of a hundred strains, which led to the identification of genes of interest and the establishment of a comprehensive collection of “Deinobricks”: DNA fragments that can be used for strain optimization;

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<sup>1</sup> See: Press release 21 January 2015

- Strengthening the fermentation capabilities (x10) through acquisition of new equipment and the development of data processing software. Now 32 different fermentation conditions can be tested in parallel.
- Achievement of targeted production yields up to five times greater than that of the wild strain, demonstrating the commercial viability of the process.

According to the aid agreement signed in 2013<sup>2</sup>, validation by ADEME of achievement of deliverables associated with the 2<sup>nd</sup> key milestone triggers the payment of approximately € 1.5 million of repayable advances, expected by the end of June 2016.

### The DEINOCHEM project

The DEINOCHEM project aims to develop and market high performance and cost-effective bioproduction processes using biomass as raw material and based on the exploitation of *Deinococcus* bacteria. The compounds produced by these bacteria can be substituted for the products usually derived from petroleum, or extracted from plants but suffering from low yields and high production costs.

DEINOCHEM first targets isoprenoids, which constitute one of the families of the most diverse natural substances (over 22,000 isoprenoid compounds are listed to date). They are subject to many industrial applications in cosmetics, food supplements, pharmaceutical, food and feed...

*Deinococcus* bacteria are naturally equipped with capabilities that make them conducive to such development: natural expression of carotenoids (key subfamily of the isoprenoid pathway), assimilation of various carbon sources, and adaptation to high-flow metabolic engineering...

DEINOCHEM, which is planned to represent a total investment of € 15.9 m by 2018, receives financial support of € 5.9 m over three and a half years, awarded by ADEME and the CGI as part of the “Investments for the Future” programme.

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<sup>2</sup> See: Press release 13 November 2013

## 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 almost 50 people in its new offices and laboratories located in Montpellier, France.

*More information at [www.deinove.com](http://www.deinove.com)*

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