

## Press release

## DEINOVE TAKES ITS CAROTENOIDS PRODUCTION FORWARD AND INITIATES A COLLABORATION WITH CANADA'S POS BIO-SCIENCES

- Complete structuring of the DEINOVE strain bank has allowed detection of a wide range of naturally occurring carotenoids.
- By collaborating with POS Bio-Sciences, DEINOVE aims to accelerate the commercial deployment of its high-value carotenoid platform.

Montpellier, 16 June 2015 – DEINOVE (Alternext Paris: ALDEI), a biotech company developing innovative processes for producing biofuels and bio-based chemicals by using *Deinococcus* bacteria as host strains, announces that it has struck a strategic partnership with the Canadian company POS Bio-Sciences for the development of its carotenoid production process including the extraction and purification of these high added-value compounds.

As part of its DEINOCHEM bio-based chemicals project, DEINOVE has worked for several years to leverage the natural propensity of *Deinococcus* to produce carotenoids. The work on the characterization of its 6,000-strain bank resulted in a palette of various carotenoids, some even totally unique, like Deinoxanthin, that can be enhanced by DEINOVE's biotechnological tools. The objective of the company is now to exploit this opportunity commercially.

DEINOVE has decided to join forces with POS Bio-Sciences to make progress in structuring its carotenoids portfolio. POS Bio-Sciences is a recognised leader in the extraction of high-value compounds, including carotenoids, based on proven processes.

The global market for carotenoids is expected to reach \$ 1.4 billion by 2019, with an average annual growth rate estimated at 3.5% since 2014¹. In 2013, Europe was the largest market. The applications for these molecules continue to diversify in food and feed, and in cosmetics and health. The supply of bio-based solutions remains limited by high production costs as carotenoids are present in some plants, but in small quantities. "Extracting the compounds, present at very low levels, regardless of the cost of the material, is a major technical and economic limitation", says Nagib Ward, DEINOVE's VP Business Development. "Our bacteria multiply quickly and produce carotenoids naturally from any feedstock and, through our advances in genetic engineering, we can achieve significant levels, giving us a real competitive advantage. Not to mention the possibility of creating a hybrid offering: collecting carotenoids generated as a co-product of another DEINOVE's bioproduction process, which improves the economic equation significantly".

Emmanuel Petiot, CEO of DEINOVE added: "We remain focused on our core strengths: metabolic engineering and fermentation production of bio-based chemicals from our strains. We chose to collaborate with POS Bio-Sciences to improve our value proposition and reach the market faster. By combining our expertise with POS' experience in the production of purified compounds on an industrial

<sup>&</sup>lt;sup>1</sup> Source: http://www.marketsandmarkets.com/Market-Reports/carotenoid-market-158421566.html?gclid=CJ656ru3gMYCFc\_HtAodm3YAyQ



scale, we aim to develop a commercial range able to interest many partners. This project is a strategic development for DEINOVE".

## **About POS Bio-Sciences**



POS Bio-Sciences is a global 38-year-old contract R&D specializing Organization, in the extraction, fractionation, purification and modification of biobased ingredients. They work in a wide range of industries including: food, feed, supplements, cosmetics, biofuels and more. POS Bio-Sciences has collaborated among others with Ocean Nutrition Canada (owned by DSM) on process scale-up and extraction of oil products. They operate two facilities: a 55,000 sq/ft facility and a 12,000 sq/ft semi-works facility with 11 laboratories (analytical and R&D), and 7 pilot plants, including a flammable processing area for

solvent extractions. Supporting services include: Analytical testing, QA/QC, Engineering and Logistics. *More information at www.pos.ca* 

## **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

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