

DEINOVE VALIDATES KEY MILESTONE 3 OF ITS DEINOCHEM PROGRAM AND RECEIVES €0.8 MILLION FROM ADEME

- ADEME has validated key step 3 of the DEINOCHEM program after the performance targets were met for the production of the compounds of interest.
- DEINOVE is pursuing the development of its bio-based carotenoids aimed at the healthcare, nutrition and cosmetics markets.
- In accordance with the aid agreement signed with ADEME, DEINOVE received approximately 0.8 million euros.

Montpellier, December 14, 2016 – DEINOVE (Alternext Paris: ALDEI), a biotech company that discovers, develops and produces high value compounds from rare bacteria, notably from the *Deinococcus* genus, announces that it has validated the 3rd key milestone of its DEINOCHEM program, dedicated to the bio-based production of carotenoids and financed by ADEME (the French Environment and Energy Management Agency) under the “Investissements d’Avenir” (Investments for the Future) program.

This new key milestone validates the technical progress made in developing the carotenoid production process. The target thresholds for productivity and yield have been reached using optimized *Deinococcus* strains on the laboratory scale. Beyond genetic engineering, the following steps are already underway:

- Development of a carotenoid extraction and purification process from the fermentation medium to obtain a marketable product;
- Scale up of the carotenoid production process for industrial use;
- Identification and selection of subcontractors ensuring rapid start-up for production.

The Company’s ambition is to market its first batches of the target compounds in 2018, and last November it announced¹ that it had selected Processium, an expert in industrial process engineering, to work with on these developments.

“We are highly satisfied with these results, which validate the progress obtained in developing our bio-based carotenoids and confirm our strategic choices to refocus our activities on molecules with high added value,” declared Emmanuel Petiot, CEO of DEINOVE. *“Carotenoids represent market opportunities worth several hundreds of millions of dollars in a wide range of applications in healthcare, nutrition and cosmetics. We are more than ever focused on getting to the market quickly.”*

In accordance with the aid agreement signed in 2013², ADEME’s validation that the expected results have been obtained for the deliverables intended in Key Milestone 3 resulted in the payment, early December, of approximately €0.8 million in repayable advances.

¹ See Press release of 14 November 2016

² See Press release of 13 November 2013

The DEINOCHEM program

The DEINOCHEM program targets the production of carotenoids, compounds that are naturally found in many living beings and widely used in industry for their coloring and antioxidant properties. The worldwide carotenoid market is expected to reach \$1.8 billion by 2019³. In 2013, Europe was the largest market, followed by North America. Applications for these molecules are becoming increasingly diversified in human and animal food, as well as in cosmetics and healthcare. The largest share of production comes from petroleum derivatives, but natural molecules are generating the strongest growth, notably due to consumer demand. Today, there are several production techniques such as extraction from tomatoes (lycopene) or paprika (capsanthin) and bioproduction from algae (astaxanthin) or microorganisms (beta-carotene). The supply of bio-based solutions is nonetheless limited due to their high production costs.

DEINOVE's objective is to provide industrials with a competitive, bio-based alternative by developing a carotenoid biotechnological production process and offering significant advantages in terms of supply stability and quality, natural resource conservation and costs.

DEINOCHEM, which is expected to require a total investment of €15.9 million by 2018, benefits from €5.9 million in financial support over 3½ years from ADEME and CGI as part of the "Investissements d'Avenir" (Investments for the Future) program.

About DEINOVE

DEINOVE (Alternext Paris: ALDEI) is a biotech company that discovers, develops and produces compounds with industrial value from rare microorganisms, for the healthcare, nutrition and cosmetics markets.

These innovative production methods represent a sustainable and competitive alternative.

For this, DEINOVE relies on two key assets:

- A unique strain bank with 6,000 rare bacteria that have not yet been exploited, mainly of the *Deinococcus* genus;
- A genetic, metabolic and fermentation engineering platform that enables them to customize these natural micro-factories, transforming them into new industry standards.

Based in Montpellier, DEINOVE employs approximately 50 employees and has nearly 170 international patent applications. The Company has been listed on Alternext since April 2010.

More information on www.deinove.com

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³ Source: MARZ, U. (July 2015) *The global market for carotenoids*. BCC Research