Press release

**MONTPELLIER**
**26 SEPTEMBER 2019**
**6:30 PM CEST**

# 2019 Half-year consolidated results: Deinove's progress coming to fruition

- **Launch of the Phase II trial testing DNV3837 for first-line treatment of moderate to severe *Clostridioides difficile* infections**
- **Communication by USAMRIID of positive *in vitro* evaluation data on DNV3681 against anthrax with the prospect of *in vivo* evaluations**
- **Publication of data demonstrating the efficacy of the first two marketed cosmetic active ingredients, Phytoene (marketed by Solvay and Univar) and Hebelys® (marketed by Greentech)**
- **Collaboration agreement with Dow for the development of a new cosmetic active ingredient based on a bacterial extract of DEINOVE**
- **First revenues from collaborative agreements in cosmetic ingredients received from three leading companies in the field**
- **Securing financial resources by setting up a convertible bonds (OCA) financing line[1] for a maximum amount of € 15m**
- **Half-year net loss of the group: – €5.4m vs. – €3.7m in the first half of 2018;**
- **Consolidated cash position:**
  - **+ €1.9m at June 30, 2019 vs + €3.9m at December 31, 2018;**
  - **+ €3.9m at August 31, 2019[2], following the subscription in July 2019 of the 1st convertible bonds Tranche by ESGO Fund for €2.1m, and the partial pre-financing of the 2018 R&D Tax Credit (CIR) in August 2019, for €1.7m.**

DEINOVE (Euronext Growth Paris: ALDEI), a French biotech company that relies on a disruptive approach to develop innovative antibiotics and bio-based active ingredients for cosmetics and nutrition, **announces that its Board of Directors has approved the financial statements for the first half of 2019.**

*"Since the beginning of the year, we have devoted resources to the preparation of the Phase II clinical trial of DNV3837. The forthcoming enrolment of the first patient will be a major step forward. At the same time, we are making progress in building a real portfolio of cosmetic ingredients, and we are very excited about the new collaboration with Dow. The OCA financing line with ESGO Fund also secures the continuation of all programs. "* **says Emmanuel PETIOT, Managing Director of DEINOVE.**

[1] Press release issued July 9, 2019
[2] Unaudited

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## SUMMARY OF CONSOLIDATED FINANCIAL DATA

As a reminder, the group's 2018 consolidated financial statements were composed of:

- DEINOVE SA, in whose accounts were included the financial flows of BIOVERTIS as from 01/07/18, and those of DEINOBIOTICS as from 02/11/18;
- the BIOVERTIS subsidiary, fully consolidated from 23/05/18 to 30/06/18;
- the DEINOBIOTICS subsidiary, fully consolidated until 01/11/18;
- the MORPHOCHEM subsidiary, fully consolidated as from 23/05/18.

As DEINOBIOTICS was the subject of a complete transfer of assets (TUP) to DEINOVE with an effective date of 02/11/18, and BIOVERTIS was the subject of a cross-border merger with DEINOVE, with retroactive effect to 30/06/18, the 2019 consolidated half-year financial statements of the DEINOVE group are therefore only composed of the (consolidating) company DEINOVE SA and its sole subsidiary MORPHOCHEM GmbH.

The Group's statutory auditors, audit firm PwC (PricewaterhouseCoopers), conducted a limited review of DEINOVE Group's financial statements at June 30, 2019.

### INCOME STATEMENT

| *(in thousands of euros)* | 6-month period ending June 30 | |
|---|---|---|
| | **2019** | **2018** |
| **Operating revenues** | **405** | **715** |
| Of which operating grants | 397 | 679 |
| **Operating costs** | **6,587** | **5,070** |
| Of which Research & Development costs | 5,412 | 3,682 |
| Of which Administrative and General costs | 1,175 | 1,388 |
| **OPERATING PROFIT / LOSS** | **-6,181** | **-4,355** |
| FINANCIAL RESULTS | -14 | 6 |
| PROFIT / LOSS FROM NON-RECURRING ITEMS | -49 | 157 |
| Income tax and deferred taxes | -1,140 | -661 |
| Goodwill amortization | 256 | 204 |
| Results from equity affiliates | - | - |
| **CONSOLIDATED PROFIT / LOSS** | **-5,359** | **-3,735** |

| *(in thousands of euros)* | At 30/06/19 | At 31/12/18 |
|---|---|---|
| Term deposit | – | 1,301 |
| Provision for impairment of marketable securities | – | – |
| Cash on hands | 1,928 | 2,601 |
| ICNE and bank overdrafts | – | – |
| **CASH & CASH EQUIVALENTS** | **1,928** | **3, 902** |

## OPERATIONAL PROGRESS DURING THE FIRST HALF AND AFTER THE END OF THE PERIOD

### PROGRAMS REGARDING NEW GENERATION ANTI-INFECTIVE

*DNV3837: Preparation of Phase II clinical trial in Clostridioides difficile infections (CDIs)*[3]

DEINOVE continued the preparation of the Phase II trial for its most advanced candidate antibiotic, DNV3837. The design of the trial, initially approved by the FDA prior to the acquisition of the compound by DEINOVE, has been optimized. The targeted patients' population has been expanded to cover moderate to severe CDIs for more gradual treatment evaluation. This multicentric trial aims to evaluate the efficacy of DNV3837 in a pathological context (through symptom monitoring, stool analysis, etc.), as well as to consolidate the safety and pharmacokinetic data of the antibiotic candidate.

Investigation centers have been selected and the enrolement of the first patient is expected in the coming weeks.

DEINOVE has selected Medpace as CRO[4] for the monitoring of the trial[5]. Medpace is an internationally recognized player with extensive experience in infectious diseases and more particularly gastrointestinal infections such as CDI. Its mission includes support for the design and implementation of the clinical trial (protocol review, solicitation of investigation centers, etc.), data collection and analysis, and interactions with the FDA.

The DNV3837 program was the subject of a scientific paper at the 29th Annual Congress of the European Society of Clinical Microbiology and Infectious Diseases (ECCMID), held in Amsterdam, the Netherlands, from 13 to 16 April 2019[6].

[3] Press releases issued January 31 and May 16, 2019
[4] A CRO (*Contract Research Organization*) is a service provider dedicated to biomedical research for the pharmaceutical and biotechnology industries, as well as for research organizations.
[5] Press release issued January 31, 2019
[6] Press release issued April 12, 2019

*DNV3681/DNV38377: the US Department of Defense evaluates the compound against bioterrorist pathogens*[8]

USAMRIID (US Army Medical Research Institute of Infectious Diseases) has assessed DNV3681 against anthrax (*Bacillus anthracis)* and Francis Bacillus (*Francisella tularensis*), bacteria classified in the 'high priority' of bioterrorism threats.

The current standard treatment against *Bacillus anthracis* and *Francisella tularensis* is Ciprofloxacin. Several species of pathogenic bacteria have already developed resistance to this molecule and the long treatment required after exposure to anthrax very often leads to a major imbalance in the intestinal microbiota that can lead to *Clostridioides difficile* infections. Thus, there is an urgent need to have effective and safe alternatives to face this threat.

The fact that DNV3681 is precisely very active against *Bacillus anthracis* and *Clostridioides difficile* makes it a very good candidate for this role. DNV3681 has demonstrated a higher *in vitro* efficacy than Ciprofloxacin, the reference product in the event of exposure to anthrax bacteria. These data were presented at the American Society of Microbiology Congress, ASM Microbe 2019, by Major Steven Zumbrun, PhD in Microbiology at USAMRIID. Based on these results, USAMRIID is considering an *in vivo* assessment of DNV3681.

*Completion of the 1st key step of AGIR program - €1.5m received from Bpifrance*[9]

DEINOVE has successfully completed the first key step of AGIR (Antibiotics against Resistant Infectious Germs) program to set up a robotic platform for extracting and screening antibiotic activities, in order to increase the potential for discovering new structures. As the platform is now fully operational, Bpifrance has paid €1.5m to DEINOVE. Bacterial extracts of interest are being studied to verify the innovative nature of the structures detected.

*Collaboration with the Institut Pasteur to explore the potential of new targeted strains*[10]

DEINOVE has started a partnership with the Institut Pasteur, one of the most recognized global players in infectious disease research. The Institut Pasteur provides a targeted selection of strains from their bacterial collection. As part of its AGIR program, DEINOVE is evaluating the antimicrobial potential of strains on its technological platform.

*Post-Closure: Integration of CRISPR-cas9 technology for genome editing of rare bacteria producing innovative antibiotic molecules*[11]

DEINOVE has strengthened its expertise in the genetic engineering of a wide range of rare microorganisms with the integration of CRISPR-cas9 technology into the platform for the discovery and optimization of innovative antibiotic structures. This cutting-edge technology opens up promising avenues for the identification, characterization and optimization of new gene clusters that produce antibiotic activities. It complements the platform dedicated to the identification of novel antibiotic structures in rare bacteria developed as part of AGIR Program.

[7] For the record, DNV3681 is the active molecule of the DNV3837 antibiotic compound.
[8] Press releases issued May 20 and June 24, 2019
[9] Press release issued March 21, 2019
[10] Press release issued April 9, 2019
[11] Press release issued September X, 2019

## PROGRAMS REGARDING ACTIVE INGREDIENTS OF NATURAL ORIGIN

*The mechanism of action of phytoene applied to dermocosmetic presented at the NYSCC Suppliers' day*[12]

DEINOVE has developed a unique bioproduction process that leads to the first 100% pure Phytoene. This colorless carotenoid showed anti-aging activities.

Solvay is the exclusive distributor of this active ingredient in North America and Asia under the ReGeN-oPhyt® brand. At the 40th Annual Congress of the New York Society of Cosmetic Chemists (NYSCC), DEINOVE's business partner presented the innovative mechanism of Phytoene cell regeneration. Extensive studies have shown that Phytoene acts on laminin, one of the main components of the basal blade, the junction layer between the dermis and the epidermis. It acts at the cellular level, in addition to collagen, to promote cellular regeneration and therefore anti-aging action.

This tangible scientific data strengthens the sales argument for Phytoene and allows it to differentiate itself in an extremely competitive way compared to competing solutions available today. To date, several dozen customers have been sampled worldwide to carry out confirmation tests and the first sales should start by the end of 2019.

*Collaboration agreement with Dow for the development of a new cosmetic active ingredient*[13]

DEINOVE has entered into a partnership with Dow to develop a new exclusive 100% natural cosmetic active ingredient derived from its collection of bacterial extracts. Dow has selected one of the extracts of interest from DEINOVE's bacterial collection based on promising in vitro results. DEINOVE will now design and optimize a dedicated production process then will ensure the industrial transposition and manufacture of the developed extract. Dow will be responsible for qualifying the cosmetic active ingredient, integrating it into its product portfolio and will have worldwide market exclusivity. The agreement provides for commercialization to begin in early 2021.

*COLOR2B Program: confirmed progress and prospects*[14]

The COLOR2B project, carried out in collaboration with the Avril group, involves the development of a process for the production of natural ingredients for animal feed. The strain selected for the production of this new bio-based ingredient was evaluated in a test phase to validate the optimal dosage and demonstrated that the ingredient is competitive with the reference products.

The teams are working to develop a formulation that meets regulatory and industrial expectations. The two partners aim to bring a first ingredient to market by the end of 2020.

[12] Press release issued May 13, 2019
[13] Press release issued June 5, 2019
[14] Press release issued June 11, 2019

*Post-Closure: The efficacy of Hebelys® promoted in the International Journal of Cosmetic Science*[15]

The *International Journal of Cosmetic Science* published the results of a study on the benefits of the extract of *Sphingomonas hydrophobicum*, the active ingredient of Hebelys®, a cosmetic ingredient co-developed by DEINOVE and Greentech.

An *in vitro* (on reconstructed skin) and clinical study (conducted on 24 women aged 60 to 70 years for 56 days) demonstrates the real efficacy of Hebelys® and provides concrete indications on the mechanism of action of this innovative ingredient. The effect of *Sphingomonas* extract has been evaluated on cell senescence, as well as on isotropy[16]. The study concludes that *" Sphingomonas extract delays skin ageing process, by reducing significantly cellular senescence, and potentiates the mechanisms for restructuring the skin. At the same time, Sphingomonas extract has a positive influence on self-esteem and general mood. "*

This publication supports the commercial development of Hebelys®, positioned in the high-growth "positive aging" segment. Several cosmetics manufacturers have confirmed their interest and ordered samples for integration into their formulations.

## CONSOLIDATED FINANCIAL RESULTS FOR THE FIRST HALF OF THE YEAR

### OPERATING INCOME

The DEINOVE group recorded €405k in operating revenue over H1, mainly from the operating subsidy received from Bpifrance under key step 1 of the AGIR program.

Over the same period, operating expenses amounted to €6.6m, 82% of which was in R&D. The net change in operating expenses between H1 2018 and 2019 amounts to + 1,517 k€ (+30%). It is mainly due to the €1,423k increase in external R&D costs, which is mainly due to the progress of the services provided by the CROs accompanying DEINOVE on the DNV3837 project. In addition, the €174k (+36%) increase in fees (mainly patent related) was offset by a decrease in personnel expenses, for a total of €194k (-8%), with an average half-yearly workforce of 60.2 full-time equivalents in 2019 vs. 62.1 in 2018.

### NET INCOME

The consolidated net loss for the first half of the year was €5.4m. It includes an exceptional loss of €49k, which is mainly due to a €60k charge related to accelerated depreciation following the disposal of an intangible asset.

The financial result for the first half of the year amounts to €14k, and is mainly made up of the result of transactions that DEINOVE carries out on its own shares under the liquidity contract, for an amount of €12k.

[15] Press release issued September 18, 2019
[16] Isotropy refers to the mechanical properties of skin tissue

Income tax includes almost exclusively the R&D Tax Credit. The Group's receivable for the first half of 2019 was estimated at €1,141k (compared to €661k in the first half of 2018).

### FINANCIAL SITUATION

The financing of operating expenses for the first half of 2019 required €6.7m (excluding depreciation charges), to which were added investments in laboratory equipment (including leasing rents) for €0.3m, and partial repayments (exclusively on the unconditional part) of aid for the Deinobiotics project, totaling €0.1k. Over the first half of the year, the group also raised €1.1m through the equity financing line set up in November 2018 with Kepler Cheuvreux. In addition, the group received €1.5 million in repayable advances and subsidies under the AGIR program, as well as €2.5 million under the 2017 CIR.

At 30 June 2019, the Group's Net Financial Position amounted to +€1.9m compared with +€3.9m at 1 January 2019, representing a net change of -€2.0m over the first half.

## POST-CLOSING EVENTS

In July, the Company entered into an agreement with the European Select Growth Opportunities Fund for the issuance of bonds convertible into shares ("OCAs") representing a bond issue with a maximum nominal amount of €15 million. The first tranche of €2.2m was issued at the same time as the Contract was signed.

In August 2019, DEINOVE received €1.6m net of costs for the pre-financing of the 2018 CIR set up with Société Générale Factoring.

It should also be noticed that the Company has received its first revenues from collaborative agreements in cosmetic ingredients, from three leading companies in the field.

## CORPORATE INFORMATION

On 22 January 2019, the General Assembly of BIOVERTIS approved the cross-border merger between DEINOVE, the acquiring company, and BIOVERTIS, the acquired company. On March 13, 2019, the merger between DEINOVE and its wholly-owned subsidiary BIOVERTIS was completed. This merger has a retroactive effect to June 30, 2018.

*The 2019 Interim Financial Report in French (an English version will be available soon) is available at:*
http://www.deinove.com/fr/espace-investisseurs/centre-documentation/rapports-financiers

## ABOUT DEINOVE

DEINOVE is a French biotechnology company, a leader in disruptive innovation, which aims to help meet the challenges of antibiotic resistance and the transition to a sustainable production model for the cosmetics and nutrition industries.

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DEINOVE has developed a unique and comprehensive expertise in the field of rare bacteria that it can decipher, culture, and optimize to disclose unsuspected possibilities and induce them to produce biobased molecules with activities of interest on an industrial scale. To do so, DEINOVE has been building and documenting since its creation an unparalleled biodiversity bank that it exploits thanks to a unique technological platform in Europe.

DEINOVE is organized around two areas of expertise:

- **ANTIBIOTICS, New-generation anti-infective agents**: A first antibiotic candidate is now in Phase II. The Company is also pursuing the systematic exploration of biodiversity to supply its portfolio with new leads, drawing notably on partnerships with bioMérieux and Naicons (AGIR program supported by Bpifrance).
- **BIOACTIVES, Active ingredients of natural origin** with cosmetics as the first market and potential in nutrition and health: DEINOVE already markets a first innovative active ingredient, a second in partnership with Greentech, while two others are in development with Oléos (Hallstar Group) and a third one with DOW. It also runs a program in animal nutrition with Groupe Avril.

Within the Euromedecine science park located in Montpellier, DEINOVE employs 60 employees, mainly researchers, engineers, and technicians, and has filed more than 350 patent applications internationally. The Company has been listed on EURONEXT GROWTH® since April 2010.

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