

## 2014 INTERIM FINANCIAL RESULTS

- **Promising R&D results and key partners that reinforce DEINOVE's objectives:**
  - **Confirmation of exceptional cellulolytic properties of *Deinococcus***
  - **9% bioethanol production and progress made towards industrial scale**
  - **First promising results for DEINOCHEM (3 biomolecules produced)**
  - **R&D contract with VTT (Technical Research Centre of Finland) to carry out DEINOCHEM program**
- **Industrial partnerships with Abengoa, leading ethanol producer in Europe, and Suez Environnement, to produce second-generation biofuels**
- **Half-year net loss of 3.9 million Euros, including acceleration of R&D expenses resulting from the Company's change in size, and a non-recurring expense related to the canceled project to increase capital**
- **Net financial position of +2.8 million Euros as of 30 June 2014 (vs. +3.1 million Euros as of 31 December 2013), reinforced by post-closing receipts of 2.3 million Euros. The Company's financial needs are covered until about mid-2015.**

**Montpellier, September 19, 2014** - Deinove (Alternext Paris: ALDEI), a cleantech company that designs and develops new industrial production standards based on the Deinococci bacteria, today announces its interim results for 2014.

The net result for the 1<sup>st</sup> half of 2014 is a loss of 3.920 million Euros, compared to a loss of 1.291 million Euros for the same period in the previous year. This result reflects the Company's change in size which, in one year, went from the status of young company established in a business incubator to that of a company preparing the industrialization of its processes, whose team has grown and become structured and which now has its own laboratories. As of now, the Company has the necessary resources to support its development.

The Company's growth and its two expanding research programs caused a 44% rise in operating expenses. The net result is also impacted by non-recurring costs related to the capital increase project canceled at the start of July. The net cash position was +2.8 million Euros as of 30 June 2014, and was strengthened during the summer by receipt of 2.3 million Euros (R&D Tax Credit and 1 Pacey® drawdown). The Company estimates being able to finance its activities up to mid-2015.

The first half of the year has been marked by major advances in research and development, both for the DEINOL and DEINOCHEM programs and for the more fundamental plan for metabolic properties of *Deinococcus* bacteria. Thus, DEINOVE is continuing its path toward industrialization of its processes, now with the support of two high-profile industry partners—Abengoa and Suez Environnement—and the technical support of VTT, Technical Research Centre of Finland.

*"We have achieved significant advances during this half of the year, in terms of technology as well as by signing structuring agreements with large industry partners. We will benefit from the expertise of our partners, being able to more quickly implement our Deinococci-based processes, which are efficient, cost-effective and environmentally friendly."* said Emmanuel Petiot, CEO of DEINOVE. *"We are harvesting the fruit of our significant investments in R&D, the change in the size of the Company and our team, and we are confident in pursuing this path."*

## SELECTED FINANCIAL INFORMATION

(in thousands of Euros)	6 month period ending 30 June	
	2014	2013
Total operating income	16	5
Total operating costs	3 788	2 626
o/w R&D costs	2 849	1 848
o/w G&A costs	939	778
<b>Operating profit / loss</b>	<b>-3 772</b>	<b>-2 622</b>
Financial result	29	55
<b>Current pre-tax profit / loss</b>	<b>-3 743</b>	<b>-2 567</b>
Non recurring items	-802	68
Income tax (R&D Tax Credit)	-625	-1 208
<b>Profit / loss for the year</b>	<b>-3 920</b>	<b>-1 291</b>

	to 30/06/14	to 31/12/13
<b>Net financial position</b>	<b>2 777</b>	<b>3 088</b>
o/w financial investments <sup>1</sup>	1 294	1 276
o/w term deposits (maturity < 1 year)	0	0
o/w cash instruments (maturity < 3 months)	0	0
o/w cash on hand	1 483	1 872
(o/w financial debts)	0	-60
<b>Total assets</b>	<b>8 233</b>	<b>6 961</b>
<b>Total shareholders' equity</b>	<b>5 469</b>	<b>5 658</b>
o/w equity	919	2 601
o/w conditional advances	4 550	3 057

<sup>1</sup> Excluding elements of the liquidity contract (cash and treasury shares) and deposits & guarantees.

## FINANCIAL RESULTS FOR THE SIX-MONTH PERIOD

The net result of the first half of 2014 is a loss of 3.920 million Euros, compared to a loss of 1.291 million Euros for the same period last year.

### Operating result

The DEINOVE company did not receive any operating income during the first half of the year. Simultaneously, operating expenses rose 44% to 3.788 million Euros, an increase primarily explained by:

- R&D expenses, with an increase of 54%, remained high: 75% of operating expenses, compared to 70% in H1 2013. This increase results from continued work for the DEINOL program, combined with a strong acceleration of the green chemistry program DEINOCHEM. The R&D workforce has grown significantly, as well as corresponding external expenses, especially for R&D work subcontracted to private service providers and public research organizations.

- The loss of mitigation of employer contributions allowed by the Young Innovative Company status (JEI, for its name in French), as the Company began its eighth year of activity on 1 January 2014.
- Notable increase in overall expenses, as since October 2013, DEINOVE has gathered its teams in new premises with a surface area of more than 1,000 m<sup>2</sup>. In one year, 11 recruitments have taken place (+11.7 FTE).

### **Net result**

The Company recorded a non-recurring negative item, -802 thousand Euros, which is primarily due to the 784 thousand Euros in costs related to the operation to increase capital, whose cancelation was announced by the Company on 4 July 2014.

The negative difference of 583 thousand Euros of 'Income Tax' proves to be nearly exclusively from changes to the amounts related to the R&D tax credit (CIR, Crédit Impôt Recherche). In H1 2013, the Company recorded 658 thousand Euros worth of non-recurring income to be received, corresponding with a corrective request for the 2010 and 2011 R&D tax credits, non-recurring and without equivalent in 2014. The R&D tax credit assessed for the first half of 2014 (623 thousand Euros) is higher than the 55 thousand Euros assessed in the first half of 2013 (568 thousand Euros).

### **FINANCIAL SITUATION ON 30 JUNE 2014**

The Company's financial needs primarily involved operating expenses (3.567 million Euros, excluding depreciation and amortization) and equipment investments (500 thousand Euros). In the same period, the Company received 1.480 million Euros in reimbursable cash advances (1<sup>st</sup> payment from Ademe, related to DEINOCHEM program), and raised, by setting up a Standby Equity Facility (Paceo®), a total of 2.230 million Euros in capital.

On 30 June 2014, the net financial position was up 2.777 million Euros, compared to an increase of 3.088 million Euros at the end of 2013, and the Company moreover received, in August 2014, the restitution of its R&D tax credit for 2013 for a final sum of 1.275 million Euros, as well as a part of the corrective requests for the 2010 and 2011 R&D tax credits, for 381 thousand Euros. Moreover, in July 2014, the Company proceeded with a Paceo® drawdown, which permitted it to raise net capital of 617 thousand Euros.

Considering these factors, the Company estimates being able to fund the programs underway until about mid-2015.

### **SIGNIFICANT DEVELOPMENTS**

During the year, DEINOVE achieved significant success in developing its research programs.

#### **Optimization of *Deinococcus* strains**

##### **Confirmation of exceptional cellulolytic properties of *Deinococcus***

The DEINOVE researchers have used genetic engineering to create strains capable of hydrolysing of vegetable cellulose as rapidly as the benchmark microorganism *Trichoderma reesei*. Specifically, DEINOVE demonstrated that the optimized Deinococci can hydrolyze crystalline cellulose (paper) in approximately 7 days, like *Trichoderma reesei*. This filamentous fungus is traditionally used to produce numerous commercial cellulases in high demand in the industry. The cellulolytic properties of *Deinococcus*, linked to its natural xylanolytic properties, allow optimization of the use of sugars from vegetable biomass and enable the decreased use of commercial enzymes, costly additives in the production process. These properties are fundamental to implement an all-in-one process, known as Consolidated BioProcessing (CBP).

### **Demonstration of *Deinococcus* fermentation capabilities: 9% ethanol production**

Optimization of the strain selected for the DEINOL program was reflected by improved yield and productivity, and by attaining a 9% ethanol production from glucose (model substrate) in a 20-liter instrumented fermenter, world first for a bacterial process.

Several tests have been conducted afterwards with a glucose (C6) + xylose (C5) substrate, to evaluate the strict co-assimilation of these sugars, a unique ability of *Deinococcus* bacteria and an industrial bottleneck.

### **New step in automated construction of industrial strains**

DEINOVE has completed an important step in developing its automated genetic engineering platform with the deployment of computer-aided design software, developed by CAD4Bio in close collaboration with the DEINOVE researchers.

This software speeds up and streamlines assembly of “genetic building blocks” of interest before transferring them to a host strain. It reduces human intervention and standardizes them, delivering a cloning plan that is then carried out by a high-speed robot. This process of genetic engineering, on the cutting-edge of this field, enables a strain’s genome to be optimized so that it can produce various molecules of interest with maximum efficiency.

### **DEINOL program for producing biofuels from lignocellulosic biomass**

#### **Industry partnership with Spanish company Abengoa, European leader in biofuels**

In the context of the DEINOL project, the Company signed a new industrial partnership agreement with the Spanish group ABENGOA, European leader in ethanol production, equally established in Brazil and the United States, the world’s two principal countries producing ethanol. ABENGOA operates 15 factories for bioethanol production around the world, including a 2<sup>nd</sup> generation biofuel factory, and produces 3 billion liters per year. ABENGOA is now replacing the TEREOS group as industrial operator for the DEINOL project, as Bpifrance supported this change and confirmed its financial support for the project. In 2010, the DEINOL collaborative program obtained a funding commitment of 8.9 million Euros from Bpifrance, 6 million Euros of which is for DEINOVE. The Company has already received 4 million Euros and successfully completed the first key steps.

The DEINOVE teams are now working on building strains adapted to the 2G substrates used by ABENGOA (agricultural residues). The partners have been given up to three years to develop an industrial strain. If they succeed, the companies envision signing a contract for non-exclusive license to use Deinococci in the ABENGOA factories. With this new partner, DEINOVE is accessing the industrial expertise of one of the world’s major stakeholders, with high international potential.

#### **Industry partnership with Suez Environnement to convert urban waste into ethanol**

DEINOVE signed an R&D collaboration agreement with SUEZ ENVIRONNEMENT group. Lasting for a period of two years, this contract is the first step in a project to explore the potential of developing an industrial channel to transform organic urban waste into ethanol by the action of Deinococci bacteria.

This organic waste is currently processed by incineration, composting and methanization. The abundant availability of this source of carbon, its cost, and its composition conducive to the growth of microorganisms make it a realistic candidate for innovative processing through the production of molecules of industrial interest.

After having proceeded, before signing the contract, with tests on different types of substrate from the collection of urban waste, the DEINOVE teams worked to optimize a process allowing them to be converted into ethanol in optimal economic and industrial conditions. The two partners have two years to develop this process and test it at the pilot scale. If successful, the companies envision signing a contract for a license to use the DEINOL process.

### **Pursuit of testing on several industrial substrates and advances towards industrial scale**

New partnerships with ABENGOA and SUEZ ENVIRONNEMENT and contacts with other manufacturers in the field have led to conducting several series of tests on samples of substrates of different origins. These tests focus on assessing the performance of *Deinococcus* according to type of biomass (corn residues, forestry residue, etc.) and pre-treatment used. They are an indispensable prerequisite for future industrial agreements and enable DEINOVE to optimize them.

The DEINOVE teams endeavour to scale their technology, with increasingly complex substrates, in order to develop the process in conditions close to those of the industrial environment (sugar mixtures (model substrates) representative of cellulosic biomass hydrolyzates before proceeding with real industrial substrates).

In the framework of a complete test campaign, they launched a first 300L fermentation on simple sugars with its long-time partner, VTT, in Finland, to study the behavior of the strain and adjust it. VTT has at its disposal fermenters up to the scale of m<sup>3</sup>, and is one of the world leaders in the treatment of the lignocellulosic biomass. The first ethanol productions have been observed in VTT laboratories and the process is being optimized. These preliminary tests performed in the 300L fermenter allow DEINOVE researchers to prepare the strain in view of the scaling of complex substrates fermentation, the main objective of the Company in the coming years.

### **DEINOCHEM program to produce chemical compounds from the isoprenoid family**

#### **First promising results and acquisition of an exclusive license to use the GENOPLANTE-VALOR technology concerning the key enzyme DXS**

The DEINOVE researchers have managed to produce in the laboratory, in significant concentrations, three molecules of industry interest derived from the isoprenoid pathway. The construction was performed on a strain of *Deinococcus geothermalis* integrating the key enzyme DXS optimized with the GENOPLANTE-VALOR technology, which allowed the bacteria to substantially improve the production of these compounds.

This process constitutes a major proof of concept, opening the way for the production of multiple chemical intermediates and specialty molecules, currently mainly derived from oil or plant extracts, with low profitability and high production costs.

The bioproducts obtained from Deinococci are high value-added compounds, finding application in cosmetics as well as in the food-processing industry. Others are intended to be used in perfumery and other everyday products: especially detergents, hygiene and cleaning products. Some of these compounds can be marketed for up to several thousand euros per kilo, representing a potential market of several billion euros in revenue.

These very satisfying results have led DEINOVE to confirm having acquired the exclusive license to this patent from GENOPLANTE-VALOR, via INRA TRANSFERT, the INRA (French National Institute for Agronomic Research) subsidiary responsible for valorizing innovations.

#### **R&D contract with VTT, Technical Research Centre of Finland**

Already a partner in the DEINOL project, VTT, Technical Research Centre of Finland, is working with DEINOVE on the DEINOCHEM program. VTT is a world leader in the bioconversion sector and notably in enzymology, as well as fermentation.

## Corporate Information

### Cancelation of capital increase

In June the Company launched a capital increase for a maximum of 25 million Euros. As the conditions were not met, the operation was canceled 4 July. The operation generated a non-recurring expense of 783 thousand Euros, mostly resulting from fees and the cost of purchasing ad space.

However, canceling this operation does not call into question the fact that the Company estimates being able to cover its funding needs up to mid-2015.

### Two leading figures from the industry join DEINOVE's Board

The general assembly on 6 May 2014 approved the nomination, as independent administrators, of two high-profile leaders in DEINOVE's industrial environment:

- Dennis McGrew, former CEO of NatureWorks, American bioplastics manufacturer;
- Michael Carlos, President of Givaudan Fragrances, world leader of fragrances and flavors.

### 4 new patents issued

Despite the significant budget required for intellectual property, it is indispensable for sustaining the company and is a major differentiator.

To date, DEINOVE holds 16 domestic patents, or more than 150 international applications compared to 60 one year ago.

Specifically during the first half of 2014, DEINOVE broadened its intellectual property portfolio, notably with 4 new patents issued:

- The patent "Use of bacteria to produce bioenergy" (already issued in Europe in June 2013) was issued in Eurasia;
- The patent "Recombinant bacteria and their use in ethanol production" was issued in Ukraine;
- The patents "Enzymes and their uses" and "Laccases and their uses," focusing on both enzymes involved in cellulosic biomass digestion, were issued in South Africa.

## About DEINOVE

DEINOVE (Alternext Paris: ALDEI) is changing the green chemistry domain by designing and developing new bioproduction standards based on bacteria of yet untapped potential: the Deinococci. By taking advantage of their singular genetic properties and their unusual robustness, DEINOVE optimizes the metabolic and fermentary capacities of these natural “micro-factories” to create high value-added products from non-food biomass. The Company’s primary markets are 2<sup>nd</sup>-generation biofuels (DEINOL) and alternative chemical compounds for petroleum-derived products (DEINOCHEM), in which DEINOVE offers its technology to global industrial partners. Listed on Alternext since April 2010, DEINOVE was founded by Dr. Philippe Pouletty, CEO of Truffle Capital, and Pr. Miroslav Radman, from the Faculty of Medicine at Université René Descartes. The company employs more than 40 people in its new laboratories in Montpellier, France, at the Biopôle Euromédecine center.

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

*The interim financial report in English will be available on the Company website in the coming days.*  
<http://www.deinove.com/en/investors/documentation-center/financial-reports>

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