



– Press Release –

## First-half 2018 Operating and Financial Results

### CARBIOS processes ready to meet the global challenge of plastics end-of-life

- ✓ By achieving world-class performance in the development of its process enabling to degrade PET into building blocks, and then produce 100% recycled PET, CARBIOS is heading towards the industrialization of its technologies for biorecycling PET plastics and fibers
- ✓ CARBIOLICE: second financing round and commercial objective set for 2020
  - ✓ Solid cash position of €6.7 million as of June 30, 2018

**Clermont-Ferrand, France, September 28, 2018 (06:45 a.m. CEST)** – CARBIOS (Euronext Growth Paris: ALCRB), pioneer company in the field of bioplasturgy, today announces its operating and financial results for the first half of 2018. The financial statements as of June 30<sup>th</sup>, 2018 were approved by the company’s Board of Directors at their meeting of September 20<sup>th</sup>, 2018.

Jean-Claude Lumaret, CEO of CARBIOS, said: “CARBIOS confirms its global technological leadership in the biotreatment of plastics end-of-life. We now have extremely efficient enzymes which can be industrialized for our PET plastics and fibers biorecycling process. Along these developments and the Pilot stage launch of PET hydrolysis in a reactor of 1,000 liters, we have engaged, with TechnipFMC, the scaling-up of this technology to fulfil, as soon as 2021, the expectations of the largest global brands operating in the fields of beverage, packaging, textile, etc. This should soon enable to strengthen the Consortium we have created with L’ORÉAL. CARBIOLICE’s developments also confirm the prospect of a market launch of our enzymatic biodegradation technology for single-use plastics by 2020.”

#### 2018 first half and post-closing highlights

The first half of 2018 confirmed the good momentum that CARBIOS has taken since the successful completion of the final key stage of the THANAPLAST™ program, through significant achievements in the development of its PET plastics and fibers biorecycling process and the structuration of the industrial production unit of its subsidiary CARBIOLICE.

The highlights of the first half of 2018 and post-closing events were:

### Research & Development

- In January 2018<sup>1</sup>, CARBIOS announced that it had received a payment of €1,021,871 from Bpifrance following the **successful completion of the fifth and final key stage of the THANAPLAST™ project**. During this final key stage ended in June 2017, CARBIOS published several announcements on successful developments of its technologies. In the field of biorecycling, CARBIOS demonstrated its ability, to synthesize PET oligomers and to **produce virgin PET from post-consumer PET plastic bottles** treated by enzymatic hydrolysis. Beyond these results comforting the technological value of the innovations developed with the THANAPLAST™ project partners, CARBIOS pursued the industrialization of its biodegradation process through the joint-venture CARBIOLICE, created with Limagrain Céréales Ingrédients and the SPI funds run by Bpifrance.
- In March 2018<sup>2</sup>, CARBIOS announced that it took a new step forward in the development of its enzymatic depolymerization process rendering it applicable to **PET polyester fibers** from textile waste. CARBIOS opened a new major market by depolymerizing 100% PET textile waste fibers into their original monomers. Each year, 43 million tons of PET are produced for the fiber market<sup>3</sup>, compared to 15 million tons dedicated to the production of plastic bottles<sup>4</sup>.
- In April 2018<sup>5</sup>, CARBIOS announced a major milestone in the optimization of its biorecycling process of post-consumer PET plastic bottles, making it possible to strengthen its economic competitiveness and accelerate its scaling up towards the industrial demonstration stage. Work has been undertaken to optimize the enzyme used in CARBIOS' biorecycling process, with the support of the teams from Toulouse White Biotechnology (TWB), and in particular the Engineering Laboratory of Biological Systems and Processes (LISBP). A molecular modelling study has been carried out to analyze the relations between the 3D structure of the enzyme and its efficiency. This has made it possible to set targets enabling to improve performance and achieve a conversion speed that only CARBIOS can claim today. Thus, the time of hydrolysis has been divided by three, **97% conversion being obtained after 24 hours of reaction**.
- Post-closing, CARBIOS announced in July 2018<sup>6</sup>, new results in the optimization of its biorecycling process of post-consumer PET plastics, by further reducing of a third the duration of PET enzymatic hydrolysis, reaching therefore a conversion speed **of 97% in only 16 hours**.

These results come along with the PET hydrolysis scale-up at Pilot stage, which is now carried out in a reactor of 1,000 liters, in collaboration with CRITT Bio-Industries.

### CARBIOLICE

- Post-closing, CARBIOS announced in July 2018<sup>7</sup>, the acceleration of the development of its subsidiary CARBIOLICE and in accordance with initial commitments, a new funding of €3.35 million in the form of a capital increase by the project partners, of which €2 million is brought by the SPI funds run by Bpifrance, €1.1 million by CARBIOS and €250 000 by Limagrain Céréales Ingrédients. This second financing round has been acted by the signature of a new partner's

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<sup>1</sup> See press release dated January 11, 2018

<sup>2</sup> See press release dated March 12, 2018

<sup>3</sup> : Source: Tecnon in 2013 and IHS in 2014

<sup>4</sup> Source: SRI Consulting in 2010, ICIS in 2009 and Samsung in 2010

<sup>5</sup> See press release dated April 12, 2018

<sup>6</sup> See press release date July 19, 2018

<sup>7</sup> See press release date July 6, 2018

agreement date June 28, 2018. It is associated with the structuration of the industrial production unit and the reinforcement of commercial and technical means in anticipation of the market launch in 2020 of a new range of products using the enzymatic biodegradation technologies developed by CARBIOS. In addition, to position itself on growing markets, CARBIOS extended the scope of the license granted to CARBIOLICE to rigid packaging. This agreement, which has been the subject of an amendment to the patent and initial know-how license agreement, includes the payment to CARBIOS of an additional lump sum conditioned on the achievement by CARBIOLICE of a defined turnover.

CARBIOLICE, subsidiary of CARBIOS at 56,23%, today manufactures corn-based compounds and biopolymers for plastic manufacturers involved in different markets such as bags, mulching films and technical films. In 2020, it will expand its market reach to disposable tableware and biodegradable packaging and will commercially use its license on the enzymatic biodegradation technologies developed by CARBIOS to manufacture masterbatches. These will be used for the production of 100% compostable and 100% biodegradable single-use plastics, whose content in biobased materials will meet the new objectives set by the Energy Transition Law for Green Growth.

### **Board of Directors**

- Post-closing, Mr. Eric Arnoult (known as Erik Orsenna) resigned from his position of Board member with effect on September 20, 2018. During its meeting dated September 20, 2018, the Board of Directors co-opted, in replacement of Mr. Arnoult, the company Truffle Capital, represented by Dr. Philippe Pouletty for the term of office of his predecessor, until 2021, at the end of the Assembly called to approve the financial statements for the year ended December 31, 2020.

### **Income & Loss Statement – First-half 2018**

<b>(in thousand euros)</b>	<b>June 30, 2017 (6 months)</b>	<b>June 30, 2018 (6 months)</b>
Operating revenues	632	425
Operating expenses	2,383	2,733
<b>Operating income/loss</b>	<b>(1,751)</b>	<b>(2,308)</b>
Financial income	33	1
<b>Pre-tax profit</b>	<b>(1,718)</b>	<b>(2,307)</b>
Extraordinary profit/loss	(6)	(2)
Income tax (Research Tax Credit)	(371)	(635)
<b>Net income/loss</b>	<b>(1,353)</b>	<b>(1,674)</b>

As of June 30<sup>th</sup>, 2018, year-to-date operating income stood at €425,000 versus €632,000 for the first half of 2017. Most of this income comes from research service revenues with its subsidiary CARBIOLICE.

During the first half of 2018, CARBIOS' operating expenses stood at €2.733 million. The R&D expenses during the period were mostly used for the pre-industrial stage of the Company's PET plastics biorecycling process. External R&D expenses stood at €881,000 (compared to €337,000 in 2017 and €1.235 million in 2016), mainly due to the externalization of services enabling the Company to benefit from the expertise and know-how of its academic and industrial partners.

As a result, the net loss for the first half of 2018 settles at €1.674 million versus €1.353 million for the first half of 2017, after taking into account the research tax credit of €635,000.

### **Cash burn was €0.9 million during the first half of 2018**

CARBIOS shows a solid cash position of €6.7 million as of June 30<sup>th</sup>, 2018, compared to €7.5 million at year-end 2017. The net cash available during the six-month period decreased by €0.9 million compared to an increase of €0.7 million during the first half of 2017. Considering the cash position as of June 30<sup>th</sup>, 2018, CARBIOS should be able to cover its financing needs until the second half of 2019.

*All information concerning the risks to which CARBIOS is exposed is available in the “Principal Risk Factors” section of the Half-Year 2018 Report, available in French on the Company’s website ([www.carbios.fr](http://www.carbios.fr)) under the “Investors” tab.*

### **About CARBIOS:**

CARBIOS is a green chemistry company whose innovations provide solutions to the environmental and sustainable development issues that manufacturers currently face. Since its founding in 2011, the company has developed two industrial-scale biological processes for the biological breakdown and recycling of polymers. These unique innovations help optimise the performance and life cycle of plastics and textiles by capitalizing on the properties of specially selected enzymes. CARBIOS’s economic growth model is based on the industrial roll-out and sale of its products, enzymes, technologies and biological processes through direct licence agreements or joint ventures, to major players in the fields to whom they would most benefit. To that end, CARBIOS founded the joint venture CARIOLICE in 2016, in partnership with Limagrain Céréales Ingrédients and the fund SPI, run by Bpifrance. This company, in which CARBIOS holds a controlling share, will market the first technology licensed by CARBIOS by producing enzyme pellets used in the production of biodegradable and bio-sourced plastics. Since its founding, CARBIOS has been backed by Truffle Capital, a European investment capital player. CARBIOS qualifies as an “Innovative Company” according to Bpifrance, which makes the company’s shares eligible for inclusion in innovation-focused mutual funds (FCPIs). For more information, please visit: [www.carbios.fr](http://www.carbios.fr)

CARBIOS is also eligible for inclusion in French SME share savings accounts (PEA-PMES).

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