



- Press Release -

## 2014: A year of technical achievements and organizational structure, accelerating Carbios' pre-industrial development

- THANAPLAST™ project: Key Phase 2 completed
  - Establishment of a pre-industrial laboratory
- Scientific platform strengthened: 2 unpublished results, 2 patents filed, and 3 new members named to the Scientific Advisory Board

**Clermont-Ferrand, France, March 5th 2015** – Carbios (NYSE Alternext in Paris: ALCRB), an innovative green chemistry company specializing in breakthrough technologies dedicated to the recovery of plastic waste and the production of bio-polymers, today announced its annual results for the year ending 31 December 2014, which were approved by the company's Board of Directors on 4 March 2015.

Jean-Claude Lumaret, CEO of Carbios stated, *"From an 'early-stage' start-up, Carbios has now become a pre-industrial SME. The innovations that are being developed in the recovery of plastic waste disrupt the current order of processes and introduce a proposal of unprecedented value. With the support of its shareholders, Carbios has been able to obtain the means to reach its objectives, with results having been achieved ahead of schedule, further validating our mission and our vision. We have turned a corner in 2014, adopting a platform for pre-industrial development within the company, which has helped to accelerate the scale-up of our bioprocesses."*

### 2014: A year of organizational consolidation for Carbios, and of strategic technical progress

Over the course of 2014, Carbios achieved significant progress on the scientific front and consolidated its organizational structure. The operating highlights for the year were as follows:

- In the scientific and technical realms, the company continued to carry out the activities planned within the context of the THANAPLAST™ project, **obtaining concrete results together with the academic and institutional partners in the project**. These results have led to progress in the development of bio-processes in keeping with THANAPLAST's™ scheduled timeframe.
- On the organizational front, **Carbios strengthened its operating, scientific and administrative staff** in order to ensure the company's capabilities for its future development. Carbios has most notably strengthened its management in the key areas of bioprocess

development, finance and administration, and investor relations. In 2014, Carbios hired seven new staff members to fill these roles.

- After its IPO in December 2013, **Carbios moved to its new corporate headquarters**, leading to **the acceleration in the integration of its pre-industrial development platform for the on-going development of its bio-processes**.
- On the intellectual property front, Carbios' portfolio added **four new patent filings in 2014**. Two of these patents regard the process for biological recycling, one regards the production of biodegradable plastic, and one addresses the process for producing biopolymers. These patents bring the total number of patent families to 12 (of which two are exclusive options for worldwide licenses), representing 39 titles.
- The company's **business development** efforts continued, with the aim of identifying industrial partners across the value chains of the markets targeted, potentially interested in co-developing Carbios' bio-processes. Carbios has thus established the bases for future strategic partnerships which will be developed from 2015 onward.

#### Four key scientific and technical milestones were attained in 2014:

- In July 2014, **Carbios initiated a pre-pilot technological platform, allowing for the development phase of the process book for each bioprocess**. The process book is an industrial "how to" guide for producing the first industrially efficient unit of each bio-process.
- In July 2014, Carbios achieved a new key step in the development of its process for the controlled biodegradation and end-of-life of plastics. With its established partner Valagro, **the company produced a plastic material which is entirely biodegradable under domestic conditions via the action of an enzyme included in the material**. This first material, produced from an industrial polymer of fossil origins and an enzyme, is characterized by a loss of 50% of its mass in 15 days, and complete biodegradability in less than three months. With these results, Carbios has demonstrated that its technology provides a compelling industrial response to the evolving regulatory requirements regarding the end of life of single-use and short-term plastic materials. This new accomplishment of a key stage in its technological development allows Carbios to foresee participation on a global scale in the commercial applications of this biodegradable plastic material. These applications are particularly relevant in the agricultural sector, with compostable films and bags. Additionally, the packaging industry will be targeted, particularly for single-use food packaging, another strategic sector for Carbios.
- In November 2014 Carbios announced that, together with its scientific partners in the THANAPLAST™ project – the teams from Toulouse White Biotechnology (TWB) and the Laboratory for Engineering of Biological Systems and Processes (LISBP), both members of the National Institute of Agricultural Research (INRA) in Toulouse – the company has been successful in achieving 90% de-polymerization of a commercial plastic into poly-lactic acid (PLA, a polymer made from lactic acid) in 48 hours, resulting from its innovative enzymatic process. This exceptional result marks the beginning of the industrial pre-pilot phase as it applies to the biological recycling process of plastics, thus accelerating the timeframe initially foreseen in the THANAPLAST™ project. The result obtained by Carbios on PLA will allow the company to apply its technology to other plastic polyesters such as PET, PTT and polyamides.

- In December 2014, Carbios successfully completed the Key Phase 2 of its collaborative project, THANAPLAST™. The results obtained by the consortium of partners brought together during this stage met the research performance goals, at the laboratory level, set for the bioprocesses developed under the THANAPLAST™ project. Carbios thus received the expected public co-funding intended to help the company initiate the pre-industrial pilot of these bioprocesses. Specific examples of these bioprocesses include the production of an innovative self-destructible plastic material and a biological recycling process for a first polymer, polylactic acid (PLA).

During the year, the company's **corporate structure** also took shape, particularly as regards **infrastructure, staff and the Board of Directors**. Following are the year's organizational highlights:

- The IPO at year-end of 2013 contributed €13.3 million in new funding and allowed Carbios to accelerate the execution of its development model and ensure the carrying out of the THANAPLAST™ project.
- In April 2014, Carbios moved into new corporate headquarters with an area of 650 m<sup>2</sup>. In addition to office space for the executive, scientific and administrative staff, the new facilities provide adequate space for the inclusion of an in-house pre-industrial lab and a plastics demonstration lab. These installations allow for early-stage verification of results from the research phase, and allow the company to manage the pre-pilot development of the bioprocesses, up to the demonstration of the application of the bioprocesses.
- During the year, the company's corporate structure took shape, and the staff was strengthened. The company hired a Manager of Finance and Administration, a Manager of Laboratory Development, four scientists specializing in microbiology and plastics, and a Director of Investor Relations.
- Carbios also further strengthened its Board of Directors by adding two new members, Pascal Juery (Solvay) and Dominique Even (formerly of Sanofi). The integration of these two new Board members underscores Carbios' intention of carrying out its advanced development objectives and innovation policy. The experience of these two new Board members in governance and management at large industrial chemical corporations will provide very valuable skills and insight in addressing future challenges to be faced by Carbios.
- Carbios consolidated its Scientific Advisory Board with three new members: Henri Cramail (Director of the Organic Polymers Chemistry Laboratory in Bordeaux, France), Philippe Dubois (Director of the Center for Research and Innovation on Polymer Materials in Mons, France) and Rolf Schmid (Director of Bio4Business in Stuttgart, Germany). Their research work, in direct relation to the work that Carbios is undertaking, as well as their vast experience will contribute to the strengthening of the company's strategy and development.

### Scientific Research and Industrial Partnerships

Carbios is the leader of the THANAPLAST™ collaborative project, with a budget of €22 million over five years, of which €15 million are allocated directly to Carbios. The THANAPLAST™ project brings together **academic partners** (National Institute for Agricultural Research, or INRA, in Toulouse; National Center for Scientific Research, or CNRS; and the University of Poitiers), and **industrial partners** (Déinove, a French clean-tech company; Limagrain, an international agricultural co-operative group and the fourth largest seed producer in the world; and Groupe Barbier, a

polyethylene bag producer for the agriculture, manufacturing and distribution industries). The THANAPLAST™ project is funded in part by Bpifrance, a French public sector financing institution that supports innovative small and medium enterprises in France. Bpifrance has granted €9.6 million to the project over the course of its life, of which €6.8 million are allocated directly to Carbios. In 2014, the Key Phase 2 of the project has been finalized, which translates to the validation of its industrial viability at the laboratory level, for at least a first application of each of Carbios' bio-processes.

## Annual Results 2014

(in € thousands)	December 31, 2013 (12 months)	December 31, 2014 (12 months)
Revenue	900	664
Operating expenses	4,016	4,028
<i>of which research &amp; development expenses</i>	<i>3,314</i>	<i>2,869</i>
<i>of which general and administrative expenses</i>	<i>702</i>	<i>1,159</i>
<b>Operating income</b>	<b>-3,116</b>	<b>-3,364</b>
Financial result	-14	48
<b>Pre-tax income</b>	<b>-3,130</b>	<b>-3,316</b>
Extraordinary income	9	15
Income tax (research tax credit)	-961	-1 091
<b>Net income</b>	<b>-2,160</b>	<b>-2,210</b>
<b>Total Assets</b>	<b>16,356</b>	<b>13,733</b>
<i>of which net tangible assets</i>	<i>14</i>	<i>783</i>
<b>Cash position</b>	<b>14,598</b>	<b>11,099</b>
<i>of which marketable securities</i>	<i>701</i>	<i>2,854</i>
<i>of which term deposits</i>	<i>500</i>	<i>8,000</i>
<i>of which cash</i>	<i>13,397</i>	<i>245</i>

At December 31, 2014, revenue totaled €664,000 compared to €900,000 a year earlier. Carbios' current activity is based on developing innovative industrial bioprocesses, with the aim of optimizing the technical, economic and environmental performance of polymers. Consequently, the majority of the company's revenue currently comes from grants. Carbios thus received €637,000 granted by BPI France (the ISI program, support to industrially strategic innovation projects), corresponding to the Key Phase 2 (€301,000) and to the launching of Key Phase 3 (€336,000) of the THANAPLAST™ project. The company has also received a grant in the amount of €16,000 from the Auvergne regional government.

Carbios is pursuing its work in research and development, of which the expenditures continue to represent a very significant 71% part of operating expenses, despite a decrease of €445,000 as compared to 2013. This change is in keeping with the expenditures anticipated within the context of the grants passed on to Carbios' partners and suppliers.

Beginning in 2014, fund-raising efforts have progressively shifted to pre-industrialization research work, in particular via the investments made for the implementation of Carbios' own laboratory. Within this context, the company's net fixed assets have increased by €769,000 at year-end 2014.

Carbios' activities in 2014 have led to a net use of cash amounting to €3,499,000, which leaves the company with a net cash position of €11,099,000 at December 31, 2014. In keeping with the projections for the next three years, this position should allow Carbios to fund its activities through the end of 2017.

Jean-Claude Lumaret, CEO of Carbios, concluded, *"The year 2014 has been pivotal for Carbios. We have structured our activity in terms of resources, as well as at the scientific level. In terms of resources we established our pre-industrial development laboratory and staffed it with qualified professionals. At the scientific level, we achieved the Key Phase 2 in the THANAPLAST™ project, and unpublished results were obtained by the eminent researchers on our Scientific Advisory Board. We will continue on this path, with rigorous cash management, in order to meet our timeframe for research and development of our bio-processes, to offer pre-industrial solutions in 2016, and to obtain the best valuation of these disruptive innovations."*

## **About Carbios**

Carbios is a young, innovative green chemistry company, whose mission is to find biological solutions to the environmental and sustainable development issues faced by industrial businesses today. Carbios acquired the rights to research that was conducted over a number of years by various public and private sector laboratories. By leveraging the unique properties of biological catalysts (enzymes), it has used this research as the foundation for developing innovative industrial bioprocesses that optimize the technical, economic and environmental performance of polymers (thermoplastic materials and synthetic or food-based fibers). The company has focused its efforts on a strategic application sector: plastics. Carbios' growth strategy is based on a clear business model of industrial value creation that targets attractive markets, develops innovative and competitive bioprocesses and licenses them to major industrial stakeholders for commercialization. Carbios benefits from the financial support of the leading European venture capital firm Truffle Capital. Carbios was founded in 2011 and has been managed, since its inception, by the *Holding Incubatrice Chimie Verte* fund. Carbios was granted the label "Young Innovative Company" by Bpifrance (former OSEO) and is eligible for investments by private equity mutual funds (FCPIs).

For more information, please visit: [www.carbios.fr](http://www.carbios.fr)

**Next press release: April 30<sup>th</sup> 2015 (after market)**

Carbios is eligible for the PEA-PME, a government program allowing French residents investing in SMEs to benefit from income tax rebates.



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