



– Press Release –

CARBIOS announces grant of a second major U.S. patent focused on the recycling of complex PET plastic waste

- **CARBIOS' recycling technology is the first to enable the enzymatic treatment of all forms of PET plastic waste, including complex plastics and polyester fibers**
- **CARBIOS now holds 30 patent families worldwide, 11 related to its PET recycling technology**

Clermont-Ferrand, France, June 20, 2019 (06:45 AM CEST) – [CARBIOS](#) (Euronext Growth Paris: ALCRB), a company pioneering new, bio-industrial solutions to reinvent the lifecycle of plastic and textile polymers, announced today that the United States Patent and Trademark Office (USPTO) has issued a Notice of Allowance for **an additional U.S. patent for CARBIOS' proprietary process of recycling PET plastic waste.**

This patent application (US 2017/114205) recognizes CARBIOS for its invention of a proprietary method of recycling complex plastics, including colored, opaque and multi-layer products containing a mix of polyethylene terephthalate (PET), and at least one additional component (e.g., polyolefins, vinyl polymers, rubber, cotton or nylon fibers, paper, aluminum, starch, wood, etc.).

Many plastic products are made of multiple polymers or components that are mixed together or organized as layers. This makes them non-recyclable using current thermo-mechanical processes where mono-material waste is required. Traditional pretreatments, such as sorting, reach a limit as they are not capable of separating PET from the other components. CARBIOS' technology overcomes these issues given its:

- Stable and reliable depolymerization of PET regardless of the composition of mixed PET plastic products or the presence of other components or polymers;
- Recovery of PET building blocks (PTA and MEG monomers) from complex plastics; and
- Separation and purification for a suitable use in any original application.

This patent is the second one in the U.S. that has been applied to CARBIOS' infinite recycling technology, and it protects CARBIOS' innovation through 2033. In addition to this patent, CARBIOS owns 116 titles worldwide representing 30 patent families, six of which protect its proprietary method of recycling in full, and five of which are related to enzymes that degrade PET.

Jean-Claude Lumaret, CEO of CARBIOS, comments, *"This patent confirms CARBIOS' unique expertise and leadership in developing an infinite recycling solution for all kinds of PET waste, particularly types which are barely treatable using traditional recycling processes. Demand for technology that facilitates a circular economy is growing rapidly and we are at the forefront of providing global players an efficient alternative that protects the environment."*

Follow the link to discover more in video: [Here](#)

About CARBIOS:

CARBIOS is a green chemistry company whose innovations provide solutions to the environmental and sustainable development issues 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 optimize the performance and lifecycle 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 license agreements or joint ventures, to major players in the fields to whom they would most benefit. To that end, CARBIOS founded the joint venture CARBIOLICE in 2016, in partnership with Limagrain Céréales Ingrédients and the SPI fund, 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. CARBIOS is also eligible for inclusion in SME share savings accounts (PEA-PMEs).

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