Press Release

Carbios strengthens its world leadership in the biorecycling of plastics and textiles

- **Carbios and TBI publish an article in a prestigious scientific journal: *Biophysical Journal***
- **Exceptional achievement of research work on the use of Nuclear Magnetic Resonance (NMR) spectroscopy for understanding PET depolymerization enzymes**

Clermont-Ferrand, France, July 20th 2022 (06:45 AM CEST). Carbios (Euronext Growth Paris: ALCRB), a pioneer in the development of enzymatic solutions dedicated to the end-of-life of plastic and textile polymers, announces the publication of an article entitled *"An NMR look at an engineered PET depolymerase"* in the scientific journal *Biophysical Journal*. The scientists at Carbios and at the Company's renowned academic partner, The Toulouse Biotechnology Institute (TBI) are at the forefront of enzymatic research and innovate every day in order to optimize the end of life of plastics and textiles.

The article describes the use of Nuclear Magnetic Resonance (NMR) spectroscopy to study the thermal stability of PET depolymerization enzymes and the mechanism of adsorption of the enzyme on the polymer. This innovative approach, which required months of development, is a world first and opens up new ways of improving these enzymes. This publication confirms Carbios' international lead in the development of the most efficient enzymes for the depolymerization and recycling of plastics.

Prof. Alain Marty, Chief Scientific Officer of Carbios and co-author of the article, explains: "I am very proud of this work at the interface between two sciences, enzymology and NMR, carried out by TBI and Carbios teams. Nearly 25 researchers are currently working on our unique enzymatic technology. It is based on academic collaborations with the world's leading experts in their fields. This publication confirms the technological lead of Carbios."

Dr. Guy Lippens, CNRS Research Director and co-author of the artcle, adds: "Nuclear Magnetic Resonance (NMR) is an extraordinary biophysical technique for visualizing an enzyme directly in solution. Our study is the first to use NMR as a complementary technique to crystallography and molecular modeling to observe a PETase. This gives new perspectives to better understand the functioning of these enzymes and it makes it possible to imagine new ways of improving these enzymes. TBI researchers are proud to contribute with Carbios to finding end-of-life solutions for plastics."

About Carbios

Established in 2011 by Truffle Capital, Carbios is a green chemistry company, developing biological and innovative processes. Through its unique approach of combining enzymes and plastics, Carbios aims to address new consumer expectations and the challenges of a broad ecological transition by taking up a major challenge of our time: plastic and textile pollution.

Carbios deconstructs any type of PET (the dominant polymer in bottles, trays, textiles made of polyester) into its basic components which can then be reused to produce new PET plastics with equivalent quality to virgin ones. This PET innovation, the first of its kind in the world, was recently recognized in a scientific paper published in front cover of the prestigious journal Nature. Carbios successfully started up its demonstration plant in Clermont-Ferrand in 2021. It has now taken another key step towards the industrialization of its process with the construction of a first-of-a-kind unit in partnership with Indorama Ventures.

In 2017, Carbios and L'Oréal co-founded a consortium to contribute to the industrialization of its proprietary recycling technology. Committed to developing innovative solutions for sustainable development, Nestlé Waters, PepsiCo and Suntory Beverage & Food Europe joined this consortium in April 2019.

The Company has also developed an enzymatic biodegradation technology for PLA-based (a bio sourced polymer) single-use plastics. This technology can create a new generation of plastics that are 100% compostable in domestic conditions, integrating enzymes at the heart of the plastic product.

For more information, please visit www.carbios.com/en
Twitter: Carbios LinkedIn: Carbios Instagram: insidecarbios

Carbios (ISIN FR0011648716/ALCRB) 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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