

Press release

Green chemistry company Carbios signs a €3.2 million strategic collaboration with CNRS and Poitiers University to support the creation and launch in June 2012 of the Thanaplast SP–Carbios Bio Plastics cooperative biotechnology laboratory

A joint effort between industry and academia succeeds with the help of $THANAPLAST^{TM}$, a major collaborative project

Poitiers and Clermont-Ferrand, June 27th 2013 — Carbios, a green chemistry company specializing in the development of innovative industrial bioprocesses, proposing new competitive approaches for recovering plastic waste and producing biopolymers, today announced the signature of a pivotal €3.2-million collaboration with the National Center for Scientific Research (CNRS) and the Poitiers University. The project is part of the THANAPLAST™ private-public consortium on plastics, one of the largest projects in the field of plastics technology. Carbios is leading a team of participants from industry and academia that includes INRA, TWB, INRA [sic] Deinove, Limagrain, and the Barbier Group.

The Thanaplast SP-Carbios Bio Plastics cooperative biotechnology laboratory in Poitiers is the R&D center for Carbios and the University of Poitiers / CNRS consortium:

Its mission: develop an innovative biotechnology platform to be used in plastics technology. The historic ties between the CNRS and TRUFFLE CAPITAL, a shareholder in CARBIOS, have made it possible from the beginning for Carbios to achieve remarkable results, which were achieved by teams from the University of Poitiers, the CNRS and VALAGRO in two projects (ABEIL and BEE2) that received support from the Poitou-Charentes Regional Council as part of its *Excellence Environnementale* [Environmental Excellence] call for projects. CARBIOS along with CNRS, the University of Poitiers and VALAGRO signed an agreement for an exclusive worldwide option for an exclusive license for the commercial development and exploitation of two patent applications resulting from this work. The cooperative laboratory is the expression of Carbios's desire to continue these R&D efforts in cooperation with CNRS and the University of Poitiers as part of Thanaplast™ to reclaim plastics at the end of their useful life.

The cooperative laboratory in Poitiers, which was created from nothing and established a year ago on the site of the University of Poitiers, is the fruit of the pooling of resources between Carbios and its academic partners, the CNRS and the University of Poitiers. The laboratory relies on the expertise

and funding of various partners and specializes in the deterioration of plastic materials (polymers). This configuration was established to strengthen exchanges between partners, share know-how and speed up the establishment of R&D programs in order to improve their chances of success. This laboratory is based on the University of Poitiers campus and is associated with the CNRS via EBI (Ecology and Biology of Interactions (*Ecologie et Biologie des Interactions*)).

Carbios CEO Jean-Claude Lumaret commented that "Plastic waste (nearly 25 million tons of plastic waste are produced every year in Europe,¹ and only 20% is recycled) is a major environmental problem and a vast unexploited pool of renewable resources whose development is chief among our concerns. We are delighted to have signed this partnership agreement with teams from the CNRS, Valagro and the University of Poitiers, with its renowned expertise in evolutionary genomics, microbiology and analysis of plant-sourced biomass. The synergies created by the bringing together of our skills will hasten the success of our efforts at innovation, which is essential to the development of ground-breaking industrial bioprocesses."

CNRS President Alain Fuchs added, "The objective of this cooperative laboratory is to identify microorganisms or biological activity from natural biodiversity. Basic research will benefit from this industrial partnership."

Yves Jean, President of the University of Poitiers, concludes the remarks, saying that "We are very proud of the successful collaborative efforts between our university, a major public institution, the CNRS, and Carbios, a private company. We strongly desire to see this type of cooperation put into place as it will enable us to help research and industry join forces and launch innovative projects such as the Thanaplast SP—Carbios Bio Plastics cooperative biotechnology laboratory."

The €3.2 million collaboration will be included in the THANAPLASTTM consortium's overall budget of €22 million over five years. This consortium will bring together 60 researchers and will also receive €9.6 million in financial support from the French state innovation agency OSEO² as part of the latter's Strategic Industrial Innovation program. CARBIOS (as the project's initiator and leader) will contribute most of the budget (€15 million) and will receive €6.8 million of the €9.6 million provided by OSEO.

THANAPLAST™ is seeking to create industrial value from plastics that have come to the end of their useful lives. The consortium will leverage biological catalysts with exceptional properties (e.g. resistance to heat, extreme pH and specific chemical reactions) and will develop and patent innovative technologies for producing, transforming and recycling a broad range of plastic materials.

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¹ **Source:** April 2011 European Commission DG – Plastic waste in the environment

² Holding

About Carbios

Carbios is a young innovative green chemistry company whose mission is to find biological solutions to environmental and sustainable development issues faced by industrial businesses. Carbios develops innovative industrial bioprocesses for optimizing the technical, economic and environmental performance of polymers (including thermoplastic materials and synthetic or food-based fibers) by leveraging the unique properties of biological catalysts (enzymes). The company has initially chosen to focus its work on a strategic application sector: plastics. Carbios' growth strategy is based on a clear business model for industrial value creation that targets attractive markets, develops innovative, competitive bioprocesses and licenses them to major industrial stakeholders for commercialization. Carbios was founded in 2011 with financial support from the leading European venture capital firm Truffle Capital³ via the latter's *Holding Incubatrice Série I Chimie Verte*⁴ fund. For more information, please visit: www.carbios.fr

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³ **Truffle Capital** (founded in Paris in 2001) is a major European venture capital investor dedicated to creating technological leaders in the fields of information technology, life sciences, and energy. Truffle Capital manages €550 million in FCPR risk capital funds and <u>tax-efficient FCPI innovation funds for French taxpayers</u> (funds are frozen for seven to ten years). For more information, visit <u>www.truffle.fr</u> and <u>www.fcpi.fr</u>.

⁴ Truffle Capital founded and continues to advise a series of "Holding Incubatrice" funds (<u>www.holdingsincubatrices.com</u>), which target equity investments in SMEs.