

Global Bioenergies starts scale-up of a second process

Evrý (France), 12 December 2017 –Global Bioenergies (Euronext growth: ALGBE) today announced the start of the scale-up phase of a process converting renewable resources into acetone and isopropanol. The markets for both these 3-carbon compounds are well established and worth billions of dollars. In a further process, these two compounds can be converted to propylene, a key petrochemical building block with a market valued in excess of US\$100 billion. The process has been transferred to ARD, a specialist in scaling up fermentation processes, and the first pilot run has been successfully completed.

Founded in 2008, Global Bioenergies develops processes to convert renewable resources into fuels and materials, with the aim of reducing society's dependence on oil and limiting its carbon footprint. The most technically mature process in our portfolio is for the production of isobutene, a 4-carbon compound, from which fuels and materials are derived. While the process continues to be improved in the laboratory, demo plant trials are under way, and a full-scale plant project is being studied in a joint venture with Cristal Union, Europe's fourth-largest sugar producer.

The second process in our portfolio to enter the scale-up phase targets the production of acetone and isopropanol, two 3-carbon (C3) compounds that are extensively used in a wide range of industries (solvents, materials, cosmetics). These compounds can subsequently be converted into propylene, a key molecule in the plastics industry.

This innovative process is based on converting renewable resources by fermentation using bacterial strains with an engineered cellular metabolism. In nature, some bacteria produce acetone, but with a limited yield. Global Bioenergies' innovation consists in radically remodelling the core carbon metabolism of the strains thereby unlocking high yields of sugar conversion.

The "C3 process" has been transferred to ARD, a company installed on the Pomacle-Bazancourt agro-industrial site, which specialises in scaling up fermentation processes. A first fermentation run was successfully completed.

Yvon le Hénaff, CEO of ARD said: "This first C3 process scale-up run has enabled the successful production of a mix of acetone and isopropanol at kilogram scale. We could reach ton scale production as early as 2018."

Luc Mathis, Chief Business Officer of Global Bioenergies, commented: "This initial success is a first step toward industrial-scale operation, to be implemented in a partnership business model. Global Bioenergies has both the scale-up equipment (pilot and demo), and the required chemical engineering and industrial design capabilities to drive the project forward."

Frédéric Pâques, Chief Operations Officer of Global Bioenergies added: "Using strains whose core metabolism is engineered has enabled us to exceed the maximum fermentation yield obtainable by natural glycolysis-based bacteria in the lab, while maintaining an important carbon flux towards the targeted products. In the future, these high-yield bacteria could be used to produce many other products."

Marc Delcourt, CEO of Global Bioenergies, concluded: "The isobutene and C3 processes target different markets which together constitute the core of the petrochemical industry."

About GLOBAL BIOENERGIES

Global Bioenergies is one of the few companies worldwide, and the only one in Europe, that is developing a process to convert renewable resources into hydrocarbons through fermentation. The Company initially focused its efforts on the production of isobutene, one of the most important petrochemical building blocks that can be converted into fuels, plastics, organic glass and elastomers. Global Bioenergies continues to improve the performance of its process, to operate its demo plant in Germany, and to prepare the first full-scale plant through a joint venture with Cristal Union, named IBN-One. Global Bioenergies is listed on Euronext Growth Paris (FR0011052257 – ALGBE).

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