GLOBAL BIOENERGIES

Global Bioenergies succeeds in creating a bacterial prototype that produces isobutene from glucose

Evry, October 6, 2010 - Global Bioenergies, located on the Genopole campus at Evry (France), announces the first prototype of its manufacturing process for the biological production of isobutene. It relies on the use of a bacterial strain harboring an artificial metabolic pathway created by the company.

Global Bioenergies announces that it has reached a key milestone in the development of its process for the transformation of renewable resources into gaseous isobutene (also called isobutylene or methylpropene). An initial series of bacterial strains were developed that can produce isobutene by transforming glucose.

Marc Delcourt, co-founder and CEO of the company, states "*We have achieved our goal to bioproduce isobutene in vivo ahead of target. We are now concentrating our efforts on increasing both the rate and scale of fermentation. We plan to carry out pilot plant tests prior to the industrial exploitation of the process. This phase will require new financial investment.*"

Philippe Marlière, co-founder and designer of the process, adds "*We have taught a bacterium to convert glucose to isobutene through an entirely novel process. The metabolic layout that we established passes by 3-hydroxy-isovalerate (also called 3-hydroxy-3-methylbutyrate). This chemical intermediate, which is absent from natural bacteria is, in turn, enzymatically converted into isobutene in our strains. The process is set up in accordance with the patent application filed in July 2008.*"

Jean-Marc Paris, professor at the Ecole Supérieure de Physique et de Chimie (Paris Tech) and a member of the Scientific Advisory Board, concludes "*This is the first time that an artificial metabolic pathway, which leads the production of a light olefin from renewable resources, has been designed and assembled in a micro-organism. These results set a precedent for the in-depth changes which the worldwide chemical industry will have to undergo in the 21st century.*"

About Global Bioenergies – Founded in 2008 by Marc Delcourt and Philippe Marlière, Global Bioenergies is one of the few companies worldwide, and the only one in Europe, to produce hydrocarbons biologically. The company is developing, under exclusive license, an innovative method to bioproduce gaseous isobutene, a platform molecule belonging to the family of light olefin hydrocarbons, which is presently obtained from oil. Fuels, as well as a variety of polymers, representing a global market of $29b, can be manufactured from isobutene. Global Bioenergies is now focused on repeating this success with other molecules of the light olefin family, such as ethylene and propylene, each one associated with markets greater than $100b. Global Bioenergies closed its first financial round in early 2009, obtaining several million euros from Masseran Gestion, the venture capital arm of the BPCE, a major banking institution in France. The company also obtained a grant from OSEO to finance the preindustrial development of its process. Global Bioenergies has set up a scientific advisory board, bringing together internationally renowned chemists, microbiologists and geneticists, and currently mobilizes an R&D task force of 20 people. www.global-bioenergies.com

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