Press Release

TWB announces the creation of EnobraQ, specialist in CO_2 capture and exploitation using yeast A solution for reducing greenhouse gases?

TWB's partner, Sofinnova Partners, is the lead investor in EnobraQ, with a funding of €1.3 million from its « Green Seed Fund »

Toulouse – Paris, November 26th, 2015 **- Toulouse White Biotechnology (TWB), a pre-industrial demonstrator in the field of industrial biotechnologies managed by INRA, has announced the creation of EnobraQ, a company that develops yeast capable of using CO_2 (atmospheric or of other origins) and transforming it into molecules of interest for the chemical industry. This company, installed at the TWB laboratories, is the product of a TWB research project. Sofinnova Partners, one of Europe's leaders in venture capital specialized in life sciences and TWB's partner from the beginning, is the lead investor in EnobraQ.**

Among the different types of collaboration proposed by the TWB public/private partnership, the so-called "pre-competitive" research projects are the result of a call for projects put out each year for academic researchers. Submitted by public research teams, they are selected by the partners in the TWB consortium. The projects accepted are self-financed by TWB thanks to contributions from members who evaluate them each year. Once they reach maturity, they are proposed to partners in the consortium who have priority; they can then invest in these research projects and provide them with support through to the industrial stage. As a TWB partner, Sofinnova Partners has quickly positioned itself on the Carboyeast project, one of the first research projects selected and self-financed by TWB in 2012 and supported for 3 years by a multidisciplinary team from LISBP (Laboratoire d'Ingénierie des Systèmes Biologiques et des Procédés – Laboratory of Engineering for Biological Systems and Processes) at INSA Toulouse, led by Denis Pompon, a CNRS researcher.

Created at the start of November 2015 and presided by Leopold Demiddeleer, EnobraQ seeks to develop a biological process to capture CO_2 (atmospheric or from industry) using yeasts for the production of chemical compounds. It is based on a breakthrough innovation which consists in designing a synthetic microorganism (*Saccharomyces cerevisiae*) which, like plants and microalgae, can use CO_2 to produce a wide range of economically interesting chemical molecules. Installed at the TWB laboratories, the company, whose process is protected by 3 patents already filed, plans to quickly speed up its growth and should reach some fifteen searchers at the start of 2016.

Leopold Demiddeleer pointed out, *"New technological solutions are needed in the fight against climate change and to find substitutes for petroleum products. In this context, CO_2 is both a threat*

and an opportunity; it is both a greenhouse gas and a chemical compound that can be used as a reagent. EnobraQ provides a unique, innovative response for reducing the threat and seizing the opportunity – feeding the yeasts from its technology with $C0_2$ and decarbonized hydrogen to carry out customized chemical syntheses on an industrial scale. It is a real breakthrough."

"*The creation of a company from our self-financed research projects is a result that is highly representative of the movement that we seek to inspire in order to promote research and to speed up the industrialization of processes in biotechnologies. It is an initial validation of our model and of the effectiveness of this original public-private partnership. Collectively, we are very proud of creating value and jobs in the bioeconomy field,"* said Pierre Monsan, Founding Director of TWB, enthusiastically.

Denis Lucquin, Managing Partner of Sofinnova Partners, said, *"TWB is an amazing lever for developing the industrial biotechnology market. EnobraQ, in which Sofinnova Partners is the lead shareholder, is the perfect illustration of this. With EnobraQ, which is developing industrial microorganisms that can fix carbon dioxide in order to use it as a source of carbon for chemical molecules, we are in a perfectly symbolic case of our intervention – enormous potential for a project that is still risky."*

About TWB:

Toulouse White Biotechnology (TWB) is a preindustrial demonstrator whose goal is to speed up the development of industrial biotechnologies by facilitating exchanges between public research and industry. Its vocation is to contribute to the expansion of a bioeconomy based on the use of renewable carbon in various fields (chemistry-biochemistry, materials, energy, etc.). Various kinds of collaborative research and development projects are proposed, as well as personalized services for businesses.
In March 2011, TWA was awarded the call for project for the Investments for the Future Program (PIA – Programme Investissements d'Avenir). It receives State aid through the ANR (Agence Nationale de la Recherche- National Research Agency). TWB is a UMS (Unité Mixte de Service – Mixed Service Unit) managed by INRA under triple INRA/INSA/CNRS tutelage. With €18 million in contracts signed at the end of 2015 after three years of full-time work, the relevance of TWB's positioning and its role as an interface in public/private transfers have been reinforced. More about TWB : www.toulouse-white-biotechnology.com/

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