



Press Release

France invests € 4M in Orixha's reprocessing factory of breathable liquid for liquid ventilation

Orixha's (L2B)² project is awarded a competitive grant from France 2030 program

Lyon and Paris, May 20, 2025 - Orixha, a MedTech pioneer in liquid ventilation, announces that its (L2B)² project for the industrial reprocessing of the L2B breathable liquid has been selected by the Première Usine program of France 2030 and will receive a grant plus loan award of 4 million euros. This financial support will enable Orixha to launch the scale-up and industrial phases of an exemplary reprocessing process in terms of technological and environmental innovation. Scheduled for commissioning in 2028 in the Plaine de l'Ain Industrial Park, this factory is essential to the commercialization of its Vent2Cool solution for resuscitated cardiac arrest patients.

Living up to the ambitions of liquid ventilation

The reprocessing of Liquid2Breathe (L2B) breathable liquid, once industrialized in the Orixha factory, will meet the significant demand for total liquid ventilation solutions developed by Orixha based on its proprietary Luncolive technology. The first of these applications, Vent2Cool, has been validated for clinical trials to improve survival and neurological outcomes for cardiac arrest patients. Vent2Cool treatment requires the use of several liters of sterile L2B per patient.

"Expectations of cardiac arrest specialists for Vent2Cool are very high, since two-thirds of their patients die in intensive care units within days of initial resuscitation by emergency services. France 2030's major financial backing enables us to mobilize private investors and break out of a Catch-22 situation. Indeed, to meet the upcoming ICU demand for Vent2Cool, we need to market it at a price per patient acceptable to payers. To achieve this acceptable price, we need to industrialize the reprocessing of L2B prior to commercialization, in order to reduce the cost by a factor of four. Without the support of France 2030, investors and bankers are reluctant to bear the associated financial risk alone", insists Fabrice Paublant, CEO of Orixha, to explain the industrial and public health significance of this financing by the French State.

With the project, Orixha will structure a network of industrial partners around this cutting-edge innovation, to set up the production, reprocessing and reuse of the breathable liquid (Liquid2Breathe - L2B) in a safe manner compliant with environmental standards and regulatory requirements for medical devices. Orixha's future factory in the Plaine de l'Ain Industrial Park will produce over 20,000 Vent2Cool treatment bags per year by 2031.

Reconciling Public Health and Ecological Exemplarity

Mickaël Libardi, Orixha's R&D Technology Director and (L2B)² Project Manager, sums up the impact of the (L2B)² project. *"This project will enable us to reprocess at industrial scale the L2B used on hospital patients and to obtain a reprocessed liquid with physical and chemical properties strictly identical to the new L2B, compatible with its reuse in new patients. The reprocessing is ecologically virtuous, since it will divide the carbon footprint by five, and will be operated in a factory that is itself exemplary in terms of energy efficiency and industrial risk prevention".*

Public health issues

Thanks to L2B, Total Liquid Ventilation (TLV) offers an innovative solution for treating patients in critical situations, such as cardiac arrest, with the Vent2Cool device. By 2031, Vent2Cool will save 3,000 lives in Europe and reduced neurological sequelae for 5,000 patients resuscitated after cardiac arrest. In view of the need to control healthcare costs, the aim is to provide Vent2Cool treatment at a cost that is financially acceptable in view of the clinical benefits, by halving the total cost per patient thanks to the reuse of the L2B breathable liquid.

Environmental impact

The reuse of L2B will reduce the carbon emissions associated with the synthesis of the breathable liquid and its destruction after use, through a drastic reduction in the quantities produced and destroyed compared to using only new L2B. It will also help reduce the eco-environmental risk through strict logistical control and management of the product's life cycle.

With this initiative, Orixha is fully in line with France 2030's Green Industry ambitions: to innovate in response to major public health challenges, to produce in France while respecting the environment, and to strengthen sovereignty in terms of essential treatments in the event of a health crisis.

About Orixha - <https://orixha.com>

Orixha is a DeepTech company whose mission is to become the world leader in Liquid Ventilation by demonstrating its life-saving clinical benefits for Critical Care patients. Orixha is developing the Vent2Cool medical device to protect vital organs, particularly the brain and heart, from Post-Cardiac Arrest Syndrome, thereby significantly reducing mortality and morbidity for resuscitated cardiac arrest patients. Vent2Cool transforms the lungs into a heat exchanger with the blood compartment. This enables ultra-rapid therapeutic hypothermia to be induced, within minutes, whereas current hypothermia solutions take hours to reach the target temperature of 33°C.

Orixha's proprietary LuncoLive for "Lung Conservative Liquid Ventilation" technology, once validated in therapeutic hypothermia, will be developed for other Critical Care conditions, including Acute Respiratory Distress Syndrome.

A spin-off from the Ecole Nationale Vétérinaire d'Alfort, the University of Sherbrooke and INSERM, Orixha has received support from SATT Erganeo, WILCO, Agoranov, AURA region, Bpifrance, France 2030, EIT Health and the European Innovation Council (EIC Accelerator).

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