



The BioImpulse project gives new impetus to biotechnology in materials



The BioImpulse project, first presented in Brussels on 2 October 2019 at the EFIB (European Forum For Industrial Biotechnology and the Bioeconomy), aims to create a new adhesive resin without any of the so-called Substances of Very High Concern (SVHC).

By developing a biobased molecule of interest, the project will open up new biotechnology applications in the materials field.

Coordinated by Michelin through its ResiCare entity, this collaborative project brings together major public and private players: FCBA, INRA¹ and INSA, as well as Lesaffre through its Leaf business unit. Bioimpulse is supported by ADEME² under France's Future Investment Program.

Industrial adhesive resins have traditionally contained SVHC classified compounds. The global market targeted by their substitution represents significant potential, mainly in the automotive and construction markets.

The main objectives of the BioImpulse project:

- Create a new adhesive resin without any SVHC compound, with an improved impact on both health and the environment
- Develop an industrial scale fermentation production process of a molecule of interest at a lower cost than its oil-based equivalent
- Promote the new adhesive resin technology in the automotive and construction markets (wood in particular)
- Produce this resin in small, compact and decentralized plants, as close as possible to customers, reducing its complexity and implementation costs.

The originality of the project lies in integrating a significant section of the value chain: from the biological production of the molecule to the performance of the resin in use. Eco-design (in particular via the fermentation production process, with the possibility of 2G³ biomass supply) will be at the heart of the project in order to take the health, environmental and economic aspects into account.

- Project duration: 6 years (2019 - 2025)
- Total amount: €28.1 million
- Construction of the 1st industrial production unit planned for 2026 (depending on the industrial context and the market at the time).

Florent Menegaux, Michelin CEO: *"With this research project carried out in collaboration with our partners, Michelin continues to demonstrate its commitment to the environment, including outside the tyre industry, by making its expertise in the field of sustainable materials available to industry as a whole."*

¹ Through TWB, TBI, the LGC and CRITT-bio industries

² Agence de l'Environnement et de la Maîtrise de l'Energie

³ Non-competitive with food

Who are the partners in the BioImpulse project?



Michelin's aim is to enhance its clients' mobility, sustainably. A leader in the mobility sector, Michelin designs, manufactures and distributes the tyres best suited to their needs and uses, as well as services and solutions to improve transport efficiency. In addition, Michelin offers its clients unique moments during their travels and journeys. Michelin also develops high-tech materials for use in many fields. Headquartered in Clermont-Ferrand,

France, Michelin is present in 170 countries, has more than 125,000 employees and operates 67 tyre production facilities, which together produced around 190 million tyres in 2018 (www.michelin.com). Press contact: Corinne Meutey, +33 1 45 66 12 34.



The BioImpulse project, led by ResiCare, a Michelin Group brand, reflects Michelin's commitment to promoting sustainable materials in its products and beyond. BioImpulse also marks Michelin's entry into the field of biotechnology, providing sustainable solutions for industry, and illustrates the strategy of leveraging its expertise in high-tech materials.

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Lesaffre's Leaf business unit innovates in the field of green chemistry by developing new yeasts capable of reducing industry's dependence on fossil oil. The BioImpulse project reflects Lesaffre's commitment to this transformation. Press contact: Léa Ortiz-Bustinza l.ortizbustinz@leaf.lesaffre.com



The FCBA technological institute assists companies in the wood and furniture sector by supporting their development and helping them to integrate innovations that enable them to adapt to changing needs, markets and regulations. FCBA participates in the Bioimpulse project through its InTechFibres cluster, which develops wood-based innovations, its Wood Laboratory cluster, which validates the tests and measurements on companies' products and processes, and coordinates project communication. Press contact: Christel Froger christel.froger@fcba.fr



INRA's commitment to promoting eco-design to develop sustainable resources in the fields of green chemistry and materials chemistry, among others, is reflected in the BioImpulse project with which it is associated through its TWB and TBI units. As an industrial biotechnology accelerator

TWB acts as an interface between public laboratories (TBI, LGC). Press contacts: Aurélie Mauries and Aurélie Vérin +33 (0)5 32 11 07 31 aurelie@oxygen-rp.com - @aureliemauries



In line with its proactive sustainable development and environmental protection policy, INSA Toulouse has joined the BioImpulse project. Through one of its technology transfer structures, CRITT Bio-Industries, it is involved in integrating industrial biotechnologies to develop a process replacing oil-sourced compounds. Press contact: Véronique Desruelles veronique.desruelles@insa-toulouse.fr

FOR MORE INFORMATION, PLEASE CONSULT [HTTPS://BIOIMPULSE.BIO/](https://bioimpulse.bio/)



The BioImpulse project is supported by Ademe (Agence de l'Environnement et de la Maîtrise de l'Énergie) within the framework of France's Future Investment Program.