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Cogny secures Brazil's first authorization for industrial use of GMOs in biocontrol inputs

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CQB No. 714/26 allows Bioma to use genetically modified microorganisms in industrial production, while Orygen Research continues its R&D work

The Cogny Ecosystem, through its Bioma and Orygen Research companies, has taken a decisive step toward developing the next generation of biological agricultural inputs in Brazil. Bioma has received Biosafety Quality Certificate (CQB) No. 714/26 from Brazil's National Biosafety Technical Commission (CTNBio), authorizing the industrial production use of genetically modified microorganisms (GMOs).

This is the first authorization of its kind granted in Brazil to a company focused on producing microbiological agricultural inputs. Until now, only companies in the pharmaceutical or genetically modified plant sectors had received such approval.

The decision complements the existing infrastructure at Orygen Research, Cogny's research and development center, which already held Level 2 biosafety authorization for handling microorganisms. With the new authorization, Orygen will remain focused on research activities, while Bioma gains regulatory backing to scale the platform to industrial production and subsequently commercialize the technologies developed.

According to Artur Soares, Research & Development Director at the Cogny Ecosystem, the technology allows modified microorganisms to be used as platforms for producing specific molecules, without the microorganism itself becoming the final product ingredient.

â??The process is as follows: we insert the desired gene into a non-target microorganism, which then expresses and multiplies the molecule of interest. At the end of fermentation, the process is terminated and the biomass is processed, leaving only the purified molecule. The microorganism functions solely as a production platform, not as the final product. That

is why we can now deliver products based on metabolites and purified molecules. This is the latest generation of biological agricultural inputs worldwide, and we are already ahead,â? he said.

Several microorganisms are covered by the authorization, including a modified strain for producing isoprenoids and phytohormones. According to CTNBio's authorization, all will be handled exclusively under industrial NB-1 containment conditions, in closed bioreactors, followed by thermal inactivation or complete sterilization.

Biosafety and Scientific Advancement

Biosafety is a central component of the operation's quality standards, following the same level of rigor already established in the pharmaceutical and industrial fermentation industries. The project includes closed systems, physical segregation of material flows, cleaning and decontamination procedures, access control, microbiological monitoring and specific waste treatment. The infrastructure also includes a Clean-in-Place (CIP) system and a wastewater treatment plant with a thermal inactivation unit, which processes waste at 127Â°C for 30 to 45 minutes before disposal, in line with international good manufacturing practice protocols.

For Soares, the new platform significantly expands the company's technological horizons. â??We are expanding the applications for the future. The horizon is vast and promising: production of purified molecules, peptides for agriculture, hormonal molecules, molecules for pest control, molecules for disease control. Now the sky is the limit, with our creativity and expertise,â? he said.

The first commercial outcome of this strategy is expected to arrive in 2027, with a hormonal product line produced using the platform. â??We are already launching a hormonal product line produced this way, which will reach the market in 2027. But new molecules are coming, with other projects already underway in this area,â? said the Orygen executive.

The authorization therefore represents more than an expansion of Bioma's manufacturing capacity. It establishes a bridge between genetic engineering, industrial fermentation and agricultural molecule development, opening the way for biological inputs based not only on living organisms, but also on metabolites and purified molecules produced through controlled biotechnology systems.

According to Marcelo de Godoy Oliveira, CEO and founder of the Cogny Ecosystem, the combination of Orygen's research capabilities and Bioma's authorization for industrial production creates a platform to accelerate the transformation of biotechnology discoveries into products for agricultural use. â??With this, the Cogny Ecosystem will consolidate its position as a leader in the pure biomolecule production market in the coming years. This is possible because the company has sought the right partnerships and believed in the potential of Orygen Research's scientific work,â? he concluded.