

MICHIGAN STATE UNIVERSITY FOUNDATION

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MBI Fact Sheet

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MBI Mission

To provide de-risking and scale-up strategies for the development and commercialization of sustainable bio-based technologies.

About MBI

MBI has 25 years of experience in fermentation technologies and process scale-up. MBI combines a full spectrum of science, engineering, operational, and business expertise with an integrated and flexible infrastructure from laboratory bench to pilot plant. MBI partners with both universities and end-user companies to bridge the gap between early innovations and commercial applications. MBI's focus is in the area of Industrial or White Biotechnology, which refers to the production of fuels, chemicals, polymers, proteins and other materials from renewable resources.

MBI's Role in Development of the University Corporate Research Park

MBI's Unique Strategy Attracts Bio-Based Technology to MSU

The MSU Foundation believes the primary driver of expansion of the University Corporate Research Park will be businesses and individuals who collaborate effectively with other researchers to enhance the value of their discoveries. By nurturing biotechnology development and addressing commercialization concerns, MBI is in a unique position to attract viable bio-based businesses to the park.

MBI Provides:

- A proprietary de-risking strategy which helps prepare bio-based technical innovations for commercialization.
- A unique multi-disciplinary approach, bench scale laboratories and a three-story fermentation processing center.
- Technical experts who combine theoretical and practical knowledge in the full range of relevant disciplines including molecular genetics, microbiology, biochemistry, analytical chemistry, organic chemistry and chemical engineering. MBI managers have proven experience in bio-based technology innovation, full-scale commercial operations, strategic alliances, business development, and in starting and building successful entrepreneurial ventures.
- MBI is focused on de-risking bio-based technologies. Bio-based technologies or so-called industrial biotechnology or white technology refers to using renewable feedstocks rather than fossil-based or petro-based feedstocks. They transform these renewable feedstocks into fuels, chemicals, polymers and materials.

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How does MBI work with industrial partners?

Bobby Bringi: “The technologies developed by MBI attract the interest of corporations worldwide seeking to capitalize on advances in biotechnology. MBI also engages companies by helping them de-risk their internally developed technologies. MBI also provides these partner companies the opportunity to access intellectual resources at MSU.”

What products has MBI had a role in developing?

Bobby Bringi: “One technology that has proven successful in the market is Polylactic Acid (PLA), the first biodegradable polymer. PLA differs from conventional plastics because it is made with the bio-based feedstock lactic acid, rather than a petrochemical-based material. Some of the de-risking work related to polylactic acid took place in collaboration between private companies, MSU, and MBI. That technology is the basis for a commercial operation, and the polymer has proven successful in the market for many years.”

Importance of Investment in the Growth of the Bioeconomy

Bobby Bringi: “In an emerging area such as the bioeconomy, there is a critical need to foster partnerships between universities, industry and government. Political leaders can help by facilitating these relationships and allowing them to blossom.”

“The federal government has made a commitment to invest in renewable technologies. On a state and local level, political leaders can facilitate innovation by helping local organizations to attract federal investment.”

Background on Bringi

As the former cofounder of Phyton Inc., Bobby Bringi developed a way to extract the anti-cancer element used in the drug Taxol from trees and plants, without cutting the plants down, using plant cell fermentation technology. Bringi eventually formed a partnership with drug manufacturer Bristol-Myers Squibb and commercialized the technology.

Summary of MBI's Value to the Bioeconomy

Technology development typically begins with a breakthrough research innovation. However, before the technology can enter the market, its commercial viability must be demonstrated. The gap between an early-stage innovation and its commercial viability is a critical one. MBI helps innovators and bio-based companies bridge that gap.

Some contributions courtesy of Capital Gains, editor Ivy Hughes