

Theia Ventures Leads Pre-Seed Round in Lemnisca to Accelerate AI-Driven Biomanufacturing

Category: Business

written by News Mall | November 27, 2025



Theia Ventures, India's specialist early-stage fund focused on AI, Deeptech, energy transition, and decarbonization, today announced that it has led a pre-seed investment in Lemnisca, an emerging Bio-AI company building intelligent systems to scale biomanufacturing. This round also saw participation from PointOne Capital and Dr. Satakarni Makkapati. This fund will support Lemnisca's Bengaluru lab, AI platform development, and early pilots to scale sustainable bioproduction. The investment reinforces Theia's commitment to backing transformative technologies that enable sustainable industrial production.



Pushkar Pendse, Co-founder & CEO, Lemnisca and Shilpa Nargund, Co-founder & CTO, Lemnisca

Lemnisca is building an AI companion for fermentation that helps manufacturers scale bioprocesses faster, more predictably, and with greater efficiency. As industries shift to renewable feedstocks and biological alternatives to petrochemicals, scalable biomanufacturing has become essential. While AI has accelerated molecule discovery, the critical challenge now is taking these innovations from lab to industrial scale reliably and at speed. Lemnisca's science-aware AI works alongside scientists and operators, coupling wet-lab experimentation with dry-lab modelling to understand process biology and steer production in real time. The result is a continuously learning system that makes biomanufacturing more efficient, predictable, and fundamentally more reliable.

Lemnisca will initially partner with fermentation-led

manufacturers already advancing along their biomanufacturing journey, while also building its own internal product pipeline. The company aims to reduce development timelines by up to 50%, improve operating efficiency by 25%, and accelerate adoption of renewable and waste-carbon feedstocks, ensuring rapid validation and scalable impact. The company is currently inviting pilot collaborations and strategic partnerships across CDMOs, OEMs/SIs, and global ingredient brands.

"We are delighted to be early partners in Lemnisca's journey, where we firmly believe that biomanufacturing in today's era needs advanced digital simulators that predict how microbial processes will perform before reaching large industrial scale," said **Priya Shah, Partner at Theia Ventures**. *"The team brings rich practical experience to support the symbiotic development of this product to be applied to nutraceutical markets."*

"From day one, our question was simple: how do we make biomanufacturing the default manufacturing mode globally?" said **Pushkar Pendse, Co-founder & CEO, Lemnisca**. *"Our focus is to build the digital operating system that brings biology from lab to factory, making scale-up faster, smarter, and globally accessible."*

"We are rethinking everything, right from lab workflows to model architectures," added **Shilpa Nargund, Co-founder & CTO, Lemnisca**. *"The goal is fewer surprises at scale and faster, repeatable success."*

This is Theia Ventures' third investment from its new fund, which announced its first close anchored by British International Investment last month. The fund counts Sarla Aviation (an electric aircraft company) and Climitra Carbon (a

biochar company catering to the steel industry) as its first two investments, and the fund has committed to three additional investments to be deployed within this financial year.

About Lemnisca

Lemnisca is building the AI companion for fermentation, enabling manufacturers to optimize, scale, and operate bioprocesses with confidence. Its science-aware AI models make biomanufacturing faster, more predictable, and more sustainable. Headquartered in Bengaluru, Lemnisca works with partners across industrial biotech and specialty ingredients globally.

About Theia Ventures

Theia Ventures is one of India's first specialist early-stage funds focused on energy transition, deep tech, and decarbonization. The fund backs founders building technologies that transform industrial systems and accelerate the transition to a low-carbon economy.

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