

Press Release

Praj and Lygos to Co-develop Advanced Lactic Acid Yeast Technology for Bio-based Products

Pune/Berkeley, California, 17th June, 2020

Praj Industries Ltd. and Lygos, Inc. have signed a Memorandum of Understanding (MOU) to co-develop Lygos's proprietary yeast for the production of lactic acid. As part of this MOU, Lygos will provide its proprietary yeast platform to Praj for jointly developing into various solutions for commercial applications.

Praj has already developed and offers bacterial fermentation technology to produce lactic acid and downstream products from sugary feedstock. Lactic acid is also used in food and beverages, in cleaning agents as well as in the electronic industry. The global lactic acid market size is estimated at around \$1 Bln USD (2019).

Lygos will provide its innovative and high-performance technology, LP1 Ultra™ Yeast Platform and Carbon Sequestration Superhighway™, which is well suited to produce acid compounds.

Praj will assemble other segments of technology backed up by its expertise in process development, optimization, design scale-up and will further integrate lactic acid as a source material in to making Bioplastic, called as Polylactic Acid (PLA).

Demand for PLA acid is ~ 200, 000 tons/year, which is expected to increase substantially in the near future. PLA is an appropriate solution to replace single use plastics and reduce the burden on the waste disposal system. Due to its unique characteristics, PLA offers an improved replacement for many applications. Rising consumer awareness with respect to the need for recyclability, green packaging, and sustainability is driving significant demand globally. Unlike conventional plastic, PLA does not take decades to degrade, and as such, reduces adverse environmental impact.

Pramod Chaudhari, Executive Chairman of Praj, said, "True to its vision to make the world a better place, Praj continues to deploy advanced technologies to produce sustainable products. Our focus over the past three decades on environment, energy and agri-process industry complements global efforts to mitigate climate change and is in tune with global circular bioeconomy. We are happy to work with Lygos to co-develop their advanced yeast platform to produce highly valuable organic acid to offer our customers a better opportunity while supporting rural economy. I am confident that this association will open opportunities for both of us in the global renewable chemicals & materials industry."

Eric Steen, CEO of Lygos, stated "We are pleased to partner with Praj and the Praj Matrix team whose deep expertise spans commercialization, engineering, and scale-up, construction and operation of similar industrial processes. This is an exciting time where the world's demand for sustainable, safe products not produced from toxic petroleum continues to grow. We believe our LP1 Ultra™ platform will complement the Praj team's goal in the lactic acid marketplace. We look forward to accelerating the technology commercialization through this partnership,"

Both companies will jointly pursue identified commercial opportunities globally to establish a leading position in compostable polymers.

About Praj Industries Limited



Praj, India's most accomplished engineering company in the field of industrial bio technology is driven by innovation and integration capabilities. The company is a torch bearer of Bio-mobility, offering technology solutions globally to produce renewable transportation fuel. Praj's diverse portfolio comprises Bio-energy plants, Renewable natural gas facilities, Critical process equipment & skids, Breweries, Zero liquid discharge plants and High purity water systems. Over the past three decades, Praj has focused on the environment, energy and agri-process industry, with customer references across 75 countries. Praj Matrix, the state-of-the-art R&D facility, is the backbone for the company's endeavors in sustainable decarbonization through circular bioeconomy. Led by an accomplished and caring leadership, Praj is a socially responsible corporate citizen. Praj is listed on the Bombay and National Stock Exchanges of India.

For more information, visit www.praj.net and follow us [@PrajIndustries](https://twitter.com/PrajIndustries)

About Lygos Inc.

Founded in 2011 by leading scientists in the Department of Bioengineering at the University of California, Berkeley, Lygos has developed proprietary technology for producing diverse compounds through combined fermentation and chemical transformation. The company features a robust pipeline of multi-functional organic acids, health & wellness products, including cannabinoids, that offer compelling performance, purity and supply advantages.

Lygos has created a full-stack biological engineering platform focused on organic acid specialty chemicals and bio-monomers. Lygos' sustainable, bio-based chemicals replace expensive, environmentally degrading alternatives from traditional industrial suppliers, enabling customers to create better, safer products with value-added performance. For more information, visit www.lygos.com and follow us [@LygosBiotech](https://twitter.com/LygosBiotech).

For media enquiries:

Dr. Ravindra Utgikar

Praj Industries Ltd.

Phone : +91 20 2294 1000

Email: ravindrautgikar@praj.net

Andrew Noble

Lygos Inc.

Phone: (415) 722-2129

Email: Andrew_noble@noblecomms.com

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