

Singapore's TurtleTree debuts first-ever animal-free milk protein 'lactoferrin'

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TurtleTree, a Singapore headquartered startup, has announced the debut of the world's first precision fermentation-produced lactoferrin (LF+)—a high-value bioactive milk protein and one of the most powerful parts of cow's milk, with great functional benefits for immunity, iron regulation, and digestive health.

After TurtleTree's commercial launch of LF+, which is anticipated for Q4 2023, the company sees a clear path to profitability on a per unit basis within six to 12 months.

Lactoferrin, otherwise known as "pink gold" because of its high value and iron-rich pink hue, is naturally found in cow's milk but the low concentrations and current resource-intensive extraction processes limit access for many people. To put the value of lactoferrin into context with other dairy proteins like whey, which costs approximately \$1 per kilogram, lactoferrin retails at between \$700 to \$1,500 per kilogram. These prices reflect the significant resources necessary to extract the highly-prized protein, with up to 10,000 litres of milk—or nearly 50 cows producing a week's worth of milk—required to obtain just 1 kilogram of purified lactoferrin.

TurtleTree Founder and CEO, Fengru Lin said, "By unlocking access to one of the most powerful and multifunctional proteins in milk, we are envisioning a better food future where more people than ever before can improve their personal nutrition sustainably. Harnessing the power of precision fermentation will provide us with an abundant supply of these vital nutrients that can be enjoyed by all segments of the population through everyday food products."