

The logo for Formo, consisting of the word "Formo" in a bold, black, sans-serif font.

Joint Press Release

SMU researchers partner Europe's leading precision-fermentation company on three-country study on consumer acceptance of lab-brewed eggs

Europe & Singapore, 19 September 2023 (Tuesday) – Formo, Europe's leading precision-fermentation company, has partnered with the Singapore Management University (SMU) to examine consumer demand for a new class of products - precision-fermentation egg consumers products.

The study '[Not getting laid: consumer acceptance of precision fermentation made egg](#)' published in *Frontiers*, a peer-reviewed journal and open science platform, was conducted by Formo Bio GmbH researcher Oscar Zollman Thomas, and SMU's Professor of Communication Management [Mark Chong](#), Professor of Psychology [Angela Leung](#), research fellow Tricia Marjorie Fernandez and Psychology PhD student Shu Tian Ng.

They surveyed 3,006 from across three continents in Germany, USA and Singapore to assess consumer demand, demographic predictors and motivating factors behind the embrace of an egg product made without chickens, instead using proteins produced by bio-designed microbes.

The debut of a precision-fermentation egg product marks a widened application of the company's protein production platform, demonstrating the company's ambition, and abilities to tackle ethical bottlenecks beyond dairy. An estimated 60% of the world's chickens reside in factory farms, thus the impetus *Europe & Singapore, 19 September 2023 (Tuesday)* – to create acceptable replacements is critical, with demand growing from both consumers and industrial food manufacturers for ethical, functional alternatives.

The findings of Formo's research suggest that lab-brewed egg products are likely to find an enthusiastic market, with a substantial percentage (51% to 61%) of participants expressing a willingness to try the products. Interestingly, those consuming organic eggs and plant-based eggs displayed the highest willingness to embrace this new class of products.

While using breakthrough tech to tailor-programme microbes, Formo's brewing of proteins with precedent of consumption in the EU means such products will be able to imminently debut on markets, with ingredients considered non-novel under EU regulation. European consumers will be able to purchase precision-fermentation brewed eggs as soon as this year.

The reasons for adopting such products varied across the three countries. In Germany, participants cited animal welfare as a major factor influencing their interest. In Singapore and the USA, the main drivers were health aspects, as well as curiosity.

"This research demonstrates an appetite for precision fermentation made products, such as lab-brewed eggs, and that consumers are ready to both recognise the flaws of industrial egg production and adopt alternatives," said Oscar Zollman Thomas, lead author of the study.

"Cellular agriculture has the potential to revolutionise the way we produce and consume protein, addressing the environmental and ethical concerns associated with traditional animal agriculture," said Prof Mark Chong, SMU's lead researcher on the project. "Seeing appeal across the continents

demonstrates cellular agriculture's capacity to create not a localised, but a global food system shift," he added.

Formo CEO Raffael Wohlgensinger reflected on the research and Formo's ambitions to sell egg products, "Our decision to forge into the egg market reflects both our conviction in our protein production platform, and our end-products' ability to go toe-to-toe with conventional products. Societies around the world are waking up to the reality of industrial livestock farming, and we recognise our power to address it. Look out for our flagship egg product, What Came Third, in late 2023."

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Who is Formo?

Formo is Europe's leading precision-fermentation company. Founded in Berlin, 2019, Formo is working on a mission to replace industrialised dairy production. Over the course of the last 2 years, we've held numerous product tastings around the globe and scaled up production. Formo's market entry is scheduled for 2023, making it the first European company to launch precision fermentation-made cheese and egg products. For more information: www.formo.bio

Who is the Singapore Management University?

Singapore Management University (SMU) is internationally recognised for its world-class research and distinguished teaching. Established in 2000, SMU's mission is to generate leading-edge research with global impact and to produce broad-based, creative, and entrepreneurial leaders for the knowledge-based economy. SMU emphasises rigorous, high-impact, multi- and interdisciplinary research that addresses Asian issues of global relevance. SMU faculty members collaborate with leading international researchers and universities around the world, as well as with partners in the business community and public sector. For more information: www.smu.edu.sg

What are lab-brewed eggs?

Lab-brewed eggs are egg products with the same flavour and functionality as conventional eggs, but created without chickens. The product has the form of beaten eggs, with the crucial protein components produced by microbes, through precision-fermentation, in large brewery-like facilities.

What is precision fermentation?

Precision fermentation is the process of harnessing microbe hosts to produce specific ingredients such as fats or proteins. This is done through reprogramming the DNA of microorganisms and then fermenting them in large brewery-style facilities. Precision fermentation allows for the production of functionally identical products to those produced by animals, or completely new proteins.

Where can I find the publication?

The research paper published in the Frontiers Journal can be viewed here: <https://www.frontiersin.org/articles/10.3389/fsufs.2023.1209533/>

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