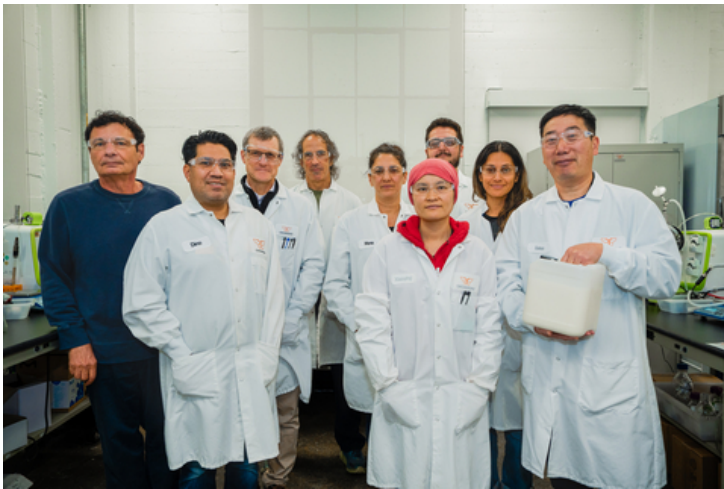


Checkerspot announces breakthrough with development of human milk fat analogue

31 January 2024 | News

This results in the production of a new generation of OPO for application in infant nutrition products



This results in the production of a new generation of OPO for application in infant nutrition products

Checkerspot, a biotechnology company and Certified B Corporation® that produces unique oils through the fermentation of microalgae, published in *Frontiers in Nutrition* a breakthrough in the development of a new source of human milk fat analogue known as OPO (Oleic-Palmitic-Oleic or sn-2 palmitate).

Human milk contains a complex mixture of triglycerides, making it challenging to recreate using common ingredients. Currently, infant formula companies use conventional oils such as palm, coconut, canola and sunflower oils in an attempt to create formulations that mimic the fatty acid profile found in the lipid fraction of human milk. However, it is incredibly challenging to precisely replicate the composition of human milk triglycerides using only vegetable oils since they do not reflect the unique positioning of the fatty acids on the glycerol backbone. Checkerspot's technology allows for precise esterification of specific fatty acids at the targeted position (in vivo), allowing for the desired distribution of triglyceride structures at the molecular level. This results in the production of a new generation of OPO for application in infant nutrition products.

In instances where breastfeeding is impractical due to physiological challenges, personal preferences, or other factors, offering alternatives that mimic the nutritional properties of human milk emerges as the preferred choice for parents and caregivers. Checkerspot is dedicated to advancing the science of viable alternatives by harnessing the potential of its microalgae-based molecular biology and fermentation capabilities.