

Application to permit the optional use of milkfat globule membrane enriched whey protein concentrate in formulated supplementary foods for young children

Executive Summary

Arla Foods Ingredients P/S (AFI) is a Danish food ingredient manufacturer supplying dairy-based ingredients, using standard whey processing techniques, for a wide variety of food applications and medical nutrition formulations for all ages. Arla Foods Ingredients P/S has developed a dairy-derived milkfat globule membrane enriched whey protein concentrate (MFGM-WPC) known under the tradename Lacprodan® MFGM-10. Compared to typical WPC's, MFGM-WPC is enriched with phospholipids, glycolipids, membrane proteins, and sphingolipids. These stem from the three-layer milk fat globule membrane (MFGM) and single layer membrane of extracellular vesicles (EV) enriched in this product. MFGM is a component of all mammalian milks and is the primary delivery mechanism of fats in mammalian milk. For simplicity the MFGM and EV membrane materials are collectively referred to as MFGM as per the body of existing literature. All young children consuming any mammalian milk products, therefore consume MFGM and its lipid and protein components, albeit at different levels.

Arla Foods Ingredients P/S is requesting amendment to the Code to permit the addition of MFGM-WPC to formulated supplementary foods for young children (FSFYC) in Australia and New Zealand at maximum addition rate of 2.3 g per serve, and not more than 40 mg of sphingomyelin per serve.

The body of evidence presented demonstrates that MFGM-containing foods support immune-relevant function in young children, with studies in and contiguous to the 1–3-year age range showing reductions in the prevalence and severity of infection-related incidences, and mechanistic data providing biological plausibility for immune modulation during this critical window. Research across the lifespan further reinforces the immune-related benefits of MFGM, and its long history of safe use and tolerability in vulnerable populations—including infants and the elderly—supports the reasonable conclusion that MFGM will be safe and well tolerated in young children. Taken together, these findings provide a strong rationale for the inclusion of MFGM-WPC in FSFYC to deliver additional immune-related benefits in the 1-3 year old age group.

Moreover, the optional addition of MFGM-WPC to FSFYC will increase the range of beneficial ingredients that can be used in these products. The addition of MFGM-WPC will provide additional nutritional benefits supporting normal development and immune function in young children. The addition of MFGM-WPC to FSFYC will increase consumer choice of products for young children that has seen limited innovation in Australia and New Zealand over a number of years.