



Omega-3-*Bifido* - probiotic to elevate Omega-3 and CLA body levels

VALUE PROPOSITION

A functional food (e.g. probiotic yogurt) containing the probiotic *Bifidobacterium breve* NCIMB 702258 will help elevate omega-3 (*n*-3) fatty acids (DHA, EPA) and *c*9, *t*11 CLA (Conjugated Linoleic Acid) levels in the body when the Essential fatty acids (linoleic acid, α -linolenic acid) are taken in the diet. The synergistic effect between probiotics and dietary fatty acids results in a highly effective nutritional approach to maintaining levels of DHA, EPA and CLA that help maintain a healthy body.

THE TECHNOLOGY

Novel strains of bacteria have been isolated and characterised, and research has shown that these probiotics beneficially modulate host cell activity by elevating levels of omega-3 fatty acids and CLA in the body.

The conversion efficiency of dietary Essential fatty acids to omega-3 fatty acids and CLA in humans is typically low (a few percent conversion) and therefore the beneficial attributes of these materials in the body are not fully realized. However, intake of the probiotic *Bifidobacterium breve* NCIMB 702258 with dietary Essential fatty acids results in elevated concentrations of the beneficial omega-3 fatty acids eicosapentaenoic acid (EPA), docosahexaenoic acid (DHA) and CLA in the host's liver and brain. The positive benefits to the host include a reduction in proinflammatory cytokines and potentially an improved cognitive ability and memory.

Probiotic Omega-3-*Bifido*



- elevates body CLA and Omega-3 fatty acids levels
- reduces secretion of pro-inflammatory cytokines

DEVELOPMENT OBJECTIVES

- To demonstrate beneficial effects of enriched CLA/EPA/DHA in host tissue following dietary supplementation with *B. breve* NCIMB 702258
- Human study (safety trial) in healthy volunteers
- EFSA claim substantiation relative to the anti-inflammatory properties

FIELDS OF APPLICATION

- Functional Foods (fluid milk, yogurt, meal replacement shakes, nutritional bars, sports nutrition, fruit juices and soy milk)

FUNDING



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