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## INCORPORATION OF DIFFERENT NATURAL POLYPHENOL EXTRACTS INTO A YOGHURT AND THEIR EFFECT ON VIABILITY OF A SELECTED PROBIOTIC STRAIN

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Polyphenols act as antioxidants and a variety of experimental studies have established that diets rich in these compounds protect against cancerogenesis. On the other hand, probiotics are defined by Fuller (1992) as “live microbial feed supplement which beneficially affects the host animal by improving its microbial balance”. Therefore, the enrichment of probiotic-containing food with natural polyphenol extracts can improve its nutrient profile and exert beneficial health effects on the consumers; on the other hand, little information is available to date regarding the effect of these chemical compounds on viability of probiotic species and in general of bacterial species present in different kinds of food for technological reasons. Consequently, the aims of our project were: (1) to prepare different extracts of strawberry-tree honey, *Cynara scolymus* L. (artichoke), *Arbutus unedo* L. fruits (strawberry-tree) and *Prunus avium* L. var. Bonnannaro fruits (cherry) and characterise them with respect to their polyphenol contents; (2) to study the effect of these extracts on viability of probiotic strain *Lactobacillus casei* ATCC 12116; (3) to incorporate these extracts into commercial yoghurt samples to verify if their presence improves the shelf-life of this food.

Our preliminary results demonstrate that commercial yoghurts supplemented with strawberry-tree ripe fruit and artichoke extracts show an increased microbial population expressed as c.f.u./g of yoghurt.

On the basis of these preliminary data, polyphenol extracts can be regarded as dietary adjuncts whose presence in probiotic food may be beneficial both for the consumers health and for the better survival of probiotic microorganisms.

Fuller R. (1992). History and development of probiotics. In: *Probiotics: The scientific basis* (R. Fuller, Ed.), Chapman & Hall, London.