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# FUNCTIONAL FERMENTED MILK WITH CAMEL COLOSTRUM FOR HEALTH PROMOTING

**Rasha Abdelaal Ibrahim [1,✉], Rehab Hamed Gab-Allah[1]**

*[1] Dairy Research Department, Food Technology Research Institute, Agricultural Research Center, Giza 12619, Egypt*

*✉rashamorsy@arc.sci.eg;✉rasha_ibrahim610@yahoo.com*

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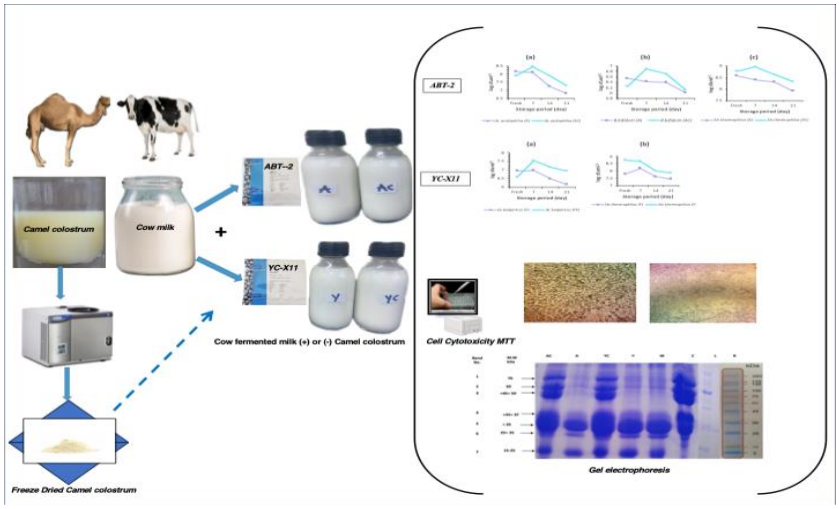
**ABSTRACT**

This study aims to investigate the in vitro anticancer properties of camel colostrum in fermented milk by comparing the antiproliferative activity of fermented cow milk with freeze-dried camel colostrum to fermented cow milk . The probiotic starter cultures DVS ABT-2 (*Streptococcus thermophilus*, *Lactobacillus acidophilus*, and *Bifidobacterium bifidum*) and YC- X11 (*Streptococcus thermophilus* and *Lactobacillus delbrueckii subsp. bulgaricus*) were used to prepare fermented cow milk separately. The chemical composition of liquid and freeze-dried camel colostrum and immunoglobulin G (IgG) concentration were analyzed. Furthermore, the analysis of fermented milk samples included physicochemical and microbiological assessments, electrophoresis pattern analysis, and sensory evaluation. The findings showed a significant antiproliferative impact on Caco-2 cells with a lower $IC_{50}$ and a rise in lactic acid bacteria availability in colostrum-fermented milk samples. Furthermore, adding freeze-dried camel colostrum enhanced both the textural and sensory characteristics of the resultant fermented milk.

## Graphical Abstract




Fermented cow milk fortified by freeze-dried camel colostrum using DVS ABT-2 or DVS YC-X11 as a starter resulted in significantly increased bacterial count, antiproliferative effectiveness, and lower $IC_{50}$ values against Caco-2 cells.