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Image Article

Various Mechanisms of Action of Probiotics: An Image Article

Gloria Thomson*

Longdom Publishing, Avenue Roger Vandendriessche, 18, 1150 Brussels, Belgium

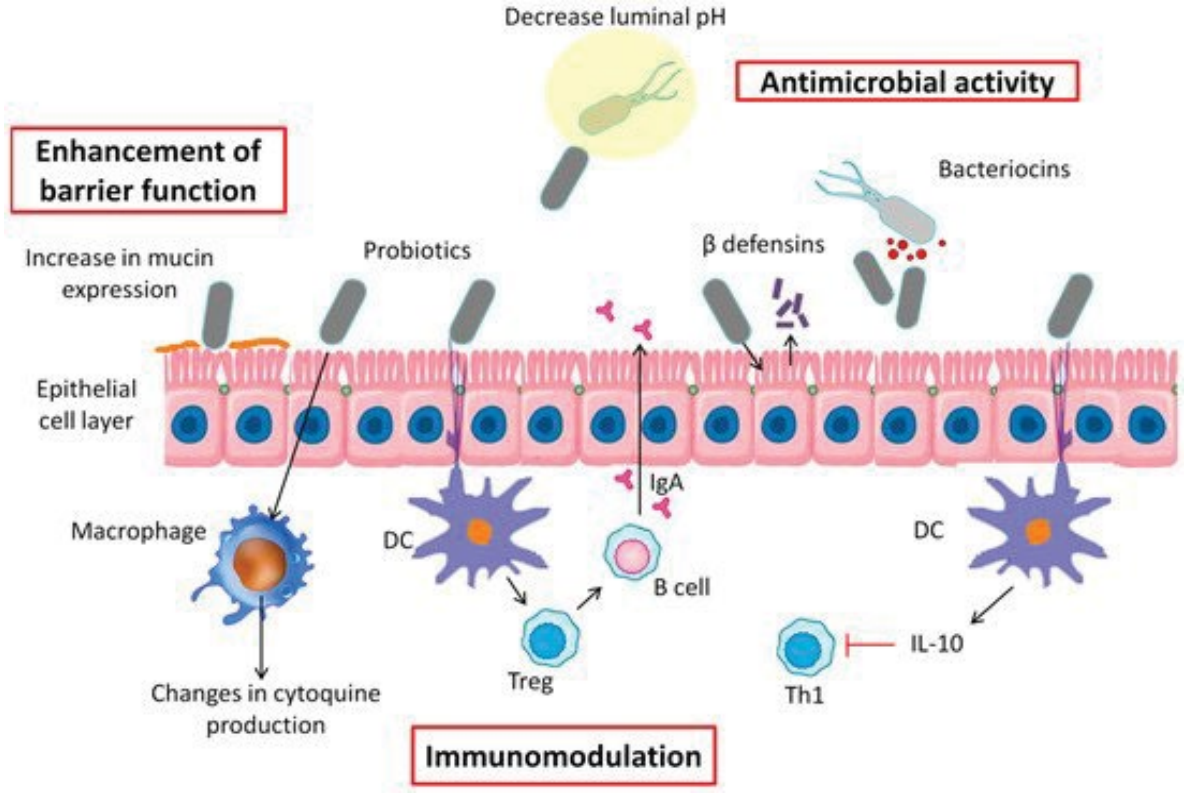

Figure 1: The figure shows the three different mechanisms of action by which probiotics helps against the microbial pathogens [1]. These mechanisms include (1) Enhancement of barrier function; (2) Immunomodulation and (3) Antimicrobial activity. Enhancement of barrier function: Probiotics are capable of influencing many of the components of epithelial barrier function either by induction of mucin secretion, the maintenance or enhancement of cytoskeletal and tight junction protein phosphorylation, the restoration of chloride secretion, and the augmentation of trans-epithelial resistance [2]. Studies have shown them to initiate repair of the barrier function after damage. Immunomodulation: Antimicrobial activities of probiotics include decreasing luminal pH, blocking bacterial adherence and translocation, or secreting antibacterial substances and defensins [3]. They also compete with the pathogenic bacteria for binding sites to epithelial cells and the overlying mucus layer. Immunomodulation: Probiotic bacteria have the ability to interact with epithelial and Dendritic Cells (DCs) and with monocytes/macrophages and lymphocytes thus exerting immunomodulatory effect [4,5].

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Correspondence to: Gloria Thomson, Longdom Publishing, Avenue Roger Vandendriessche, 18, 1150 Brussels, Belgium, E-mail: info@longdom.com

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