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(54) Title: RECOMBINANT BACTERIA AND USES THEREOF

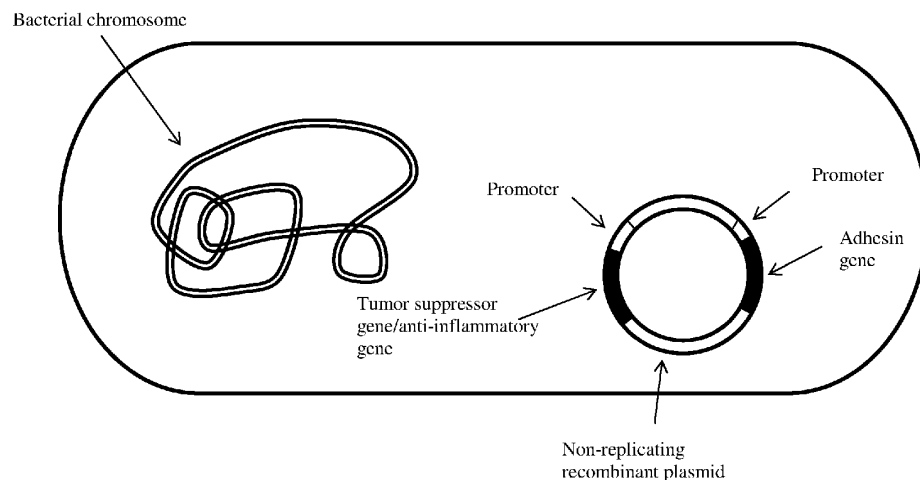


Fig. 1

(57) Abstract: The present disclosure provides a recombinant, probiotic lactic acid bacterium, wherein the bacterium comprises a non-replicating plasmid vector comprising (a) a tumor suppressor gene or anti-inflammatory gene operably linked to a first promoter that directs expression of the tumor suppressor gene or anti-inflammatory gene in a mammalian cell, and (b) an adhesin gene operably linked to a second promoter that directs expression of the adhesin gene in the bacterium. The present disclosure also provides uses of the recombinant bacterium, and methods of constructing the recombinant bacterium. The present disclosure also provides a method of treating cancer in a subject, wherein the method comprises administering a pharmaceutically effective amount of a recombinant, probiotic lactic acid bacterium, wherein the bacterium comprises a non-replicating plasmid vector comprising an adhesin gene operably linked to a promoter that directs expression of the adhesin gene in the bacterium.

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