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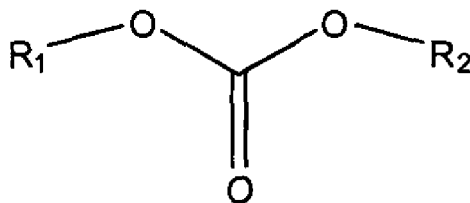
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(54) Title: ANTI-BIOFILM CARBONATE COMPOUNDS FOR USE IN ORAL CARE COMPOSITIONS



Formula 1

(57) Abstract: The present invention includes oral care compositions and methods for inhibiting growth and formation of oral biofilms by quorum sensing inhibition and/or bactericidal activity. In some embodiments, the present invention discloses an oral care composition including a therapeutically effective amount of at least one carbonate compound of Formula (1) and at least one excipient: wherein, R₁ and R₂ are independently: an aliphatic radical; a hydroxyaliphatic radical; or an aryl radical. In some embodiments, the present invention discloses a method of providing oral care benefits including applying to an oral cavity an oral care composition containing a therapeutically effective amount of at least one carbonate compound of Formula (1) and at least one excipient. In some embodiments, the present invention discloses a method of up-regulating or down-regulating periodontal disease metabolites including applying to an oral cavity an oral care composition containing a therapeutically effective amount of at least one carbonate compound of Formula (1) and at least one excipient.