

Methods and Compositions for Regulating Biofilm Development

Abstract

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The present invention relates to methods for promoting dispersal of, or preventing formation of microbial biofilms, comprising: exposing a biofilm to an effective amount of nitric oxide or at least one nitric oxide generating or releasing agent; treating a surface or medium susceptible to biofilm formation with an effective amount of nitric oxide or at least one nitric oxide generating or releasing agent; incorporating an effective amount of nitric oxide or at least one nitric oxide generating or releasing agent in a surface or medium susceptible to biofilm formation; or inducing the accumulation of one or more reactive oxygen or nitrogen species within microorganisms within said biofilm or capable of forming a biofilm. The invention also relates to methods for maintaining or enhancing or maintaining and enhancing the functioning of a biofilm, comprising exposing a biofilm to at least one nitric oxide scavenger, at least one antioxidant or at least one nitric oxide scavenger and at least one antioxidant. The invention also relates to compositions for promoting dispersal of, or preventing formation of microbial biofilms, or for maintaining or enhancing or maintaining and enhancing the functioning of microbial biofilms.

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(Figure 5A)