Novel Peptide (LBBI-1) which inhibits Staphylococcus aureus biofilm

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Technology description

LBBI-1 is a plant polypeptide formed by the medicinal plant Gymnema sylvestre .LBBI-1 has been isolated in pure form and tested against different Staphylococcus aureus to determine its anti-biofilm property.LBBI-1 does not affect the growth or viability of bacteria but blocks the synthesis of several virulence factors under in vitro conditions. It prevents the production of a protective polysaccharide matrix by the bacterium that is responsible for bacterial attachment to the medical devices and thus stops the formation of biofilms.

Currently, the market for pharmaceutical drugs that inhibit biofilm formation exceeds $6 billion annually.LBBI-1 will be used to treat S. aureus associated biofilms (monospecies or multispecies biofilms; e.g. various types of injury related, diabetic wounds, and medical device associated); greatly reducing the amount of money consumer’ s will spend annually on prescriptions and healthcare treatment costs.Finally, in the future, analogs of this inhibitor can be prepared by molecular modeling, chemical synthesis, and can be used for several other infectious bacterial biofilms.

Advantages

·LBBI-1 can be used to treat for combination therapy and coating in dwelling medical devices to stop biofilm development.

·LBBI-1 has multiple medicinal properties

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