

عنوان مقاله:

Quorum sensing inhibitors: Current progress of the natural antimicrobials

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خلاصه مقاله:

The misuses of antimicrobials in infectious diseases have led to the progress of extensive resistance in the infectious organisms. The unsuccessful of accessible antimicrobials to control infections makes it essential to discover alternatives to currently existing drugs. Their connection to infectious diseases and their natural ability increase antimicrobial resistance in microbes, has led to a platform for research focused on new techniques to control them. In this study, the pathogenicity in many bacteria is regulated by Quorum sensing (QS). The inhibition of QS system may cause the reduction of virulence and protect against bacterial infections. These bacteria rely on chemical communication (or QS) to coordinate activities necessary for their survival in groups by some course of action. Their dependence on QS has made those signaling systems within bacteria an attractive target for the design of new anti-infective agents. Compounds that can interrupt these processes are known as QS inhibitors. The QS is the key regulator of virulence in various bacteria. Various plant extracts and their chemical constituents were shown their effects on bacterial virulence factors by inhibiting of QS genes and QS-controlled factors and effects on bacterial growth. The anti-QS approach has promise in the fight against infectious pathogens, thereby making the bacteria more susceptible to traditional antimicrobials. The QSIs may provide the newest weapon against infections involving drug-resistant bacterial strains. These QSIs come from a variety of sources and have a wide array of structures.

کلمات کلیدی:

Quorum sensing inhibition, bacterial communication, Antibacterial agents

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