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**INIBIDORES DO *QUORUM SENSING*:
ATIVIDADE SOBRE BIOFILMES
BACTERIANOS**

**QUORUM QUENCHING: ACTIVITY
ABOUT BACTERIAL BIOFILMS**

Biofilm is a relevant problem in food industry because it is a source of cross contamination and microbial resistance, beyond compromising the structure of equipment and pipelines. The presence of these microbial communities may lead to corrosion, clogging and deficiency in heat transfer. Dependent on cell density, bacteria can communicate by quorum sensing, a mechanism which involves the production and detection of signaling molecules and regulates the expression of genes. thus inducing different phenotypes including biofilm formation, virulence functions, production of enzymes, pigments, bioluminescence, conjugation, motility, among others. Quorum sensing regulates biofilm formation in different bacteria, such as *Aeromonas hydrophila*, *Erwinia carotovora*, *Pseudomonas aeruginosa*, *Serratia* sp., *Escherichia coli* and *Salmonella* Enteritidis. It plays a role in all stages of biofilm formation, especially maturation, regulates metabolic activity and dispersion. The quorum quenching include mechanisms of inhibition of the synthesis, transport or secretion of the signal and receptor proteins as occurs, for example, when inhibitors structurally similar to signaling molecules are used, interfering with quorum sensing. Studies have identified a wide variety of natural quorum sensing inhibitors that have a number of advantages including non-toxic, non-microbial resistance and readily available in nature. Among these inhibitors are fruits such as grumixama, cherry, pepper, honey and garlic and others. In this context, quorum quenching can be an alternative for application in the food industry, as in the control of biofilms and use of preservatives, and may be coadjuvant in the treatment of infections with the use of antibiotics. Research in this area should be encouraged to explore the potential of natural quorum quenching.

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