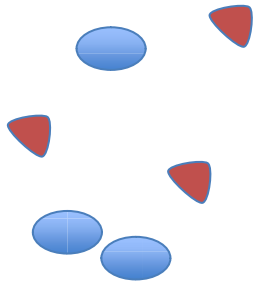
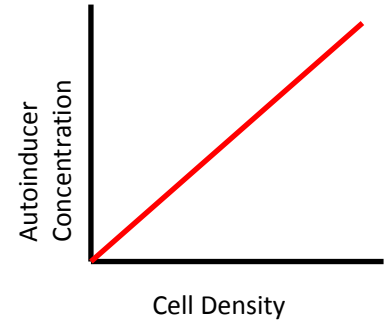
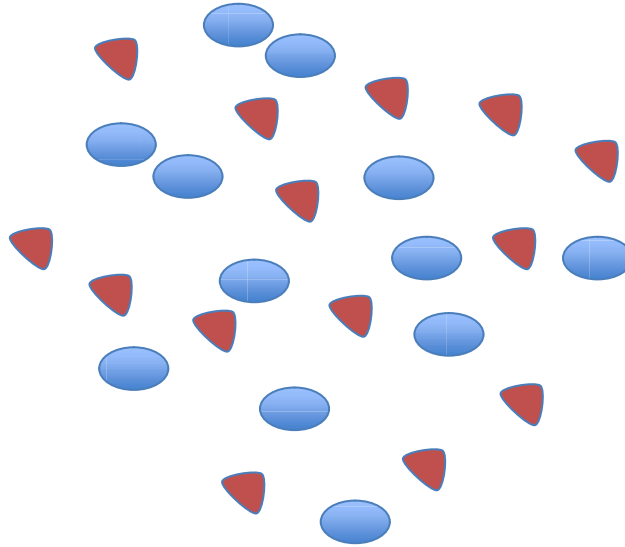


Gram Positive Bacterial Quorum Sensing

Low Density



High Density



Gram Positive Bacterial Cell



Oligopeptide Autoinducer

Each bacterial cell produces a specific autoinducer. Gram positive cells release oligopeptides, while gram negative cells release Acyl Homoserine Lactone. Autoinducer production is a way of cell to cell communication to measure population density. Quorum sensing measures population density to assist in the formation of biofilms. *S. aureus* synthesizes an octapeptide via the AgrB protein. When the signal molecule reaches a threshold, phosphorylation of the AgrC protein is stimulated. Phosphorylation of AgrC stimulates several signal transduction pathways.