# Disrupting Bacterial Communication to Thwart Them

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Interrupting Bacterial Chatter to Thwart Infection [1]
To measure their own numbers, bacteria produce, release, and detect chemical signals called autoinducers. As a population of bacteria grows, it releases more autoinducer into its environment. When individuals detect that a threshold level of autoinducer is present, they change their behavior â?? by releasing a toxin, for example.
Bassler and her colleagues disrupted these lines of communication by interfering with molecules called acyl-homoserine lactone (AHL) autoinducers, which drive quorum sensing among a kind of bacteria known as Gram-negative bacteria. Gram-negative bacteria include Pseudomonas, E. coli and Salmonella, and other disease-causing microbes. In the study, the team focused on Chromobacterium violaceum, which rarely infects human, but can be lethal to other organisms. C. violaceum lends itself to studies of quorum sensing because it produces a readily detected, bright purple dye when it detects that its population has reached a critical mass.
…
The experiment shows that interfering with quorum sensing may provide an alternative to traditional antibiotics, Bassler says, and circumvent the problem of resistance that antibiotics foster by killing off susceptible bacteria but allowing resistant ones to survive and propagate.

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