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Lights, Camera, Action! Antimicrobial Peptide Mechanisms Imaged in Space and Time

Deeper understanding of the bacteriostatic and bactericidal mechanisms of antimicrobial peptides (AMPs) should help in the design of new antibacterial agents. Over several decades, a variety of biochemical assays have been applied to bulk bacterial cultures. While some of these bulk assays provide time resolution on the order of 1 min, they do not capture faster mechanistic events. Nor can they provide sub-cellular spatial information or discern cell-tocell heterogeneity within the bacterial population. Single-cell, time-resolved imaging assays bring a completely new spatiotemporal dimension to AMP mechanistic studies. We describe recent work that provides new insights into the timing, sequence, and spatial distribution of AMP-induced effects on bacterial cells. Thursday October 1, 2015 Room 1315 (Seminar Hall) Chemistry Dept.

