

# Stochastic nature of bacterial eradication using antibiotics

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**Frequent antibiotic failure is a serious threat to public health. To cope with this threat, it is critical that we better understand population dynamics of bacteria exposed to antibiotics. In this talk, I will present our recent laboratory studies showing stochastic nature of bacterial eradication using antibiotics. Bactericidal drugs induce population fluctuations, leading to stochastic population dynamics. Consequently, bacterial clearance does not follow a deterministic course but is highly probabilistic. These population fluctuations may be manipulated to facilitate bacterial eradication.**

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