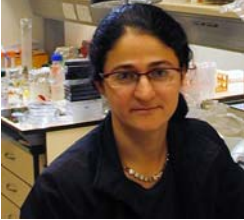




האוניברסיטה העברית - הפקולטה לחקלאות המכון לביוכימיה, מדעי המזון והתזונה

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הנושא:

Quantitative analysis of growth-arrested bacteria in microfluidic devices

המפגש יתקיים

ביום א', 10 נובמבר 2013, בשעה 9:00

במועדון הסגל

Abstract:

Since the pioneering work of Jacques Monod who laid the foundation for quantitative studies of growing bacteria, most microbiological studies have focused on exponentially growing bacteria. However, in the wild, microorganisms tend to spend most of their lifetime at stationary phase in a growth-arrested state. Despite this general prevalence growth-arrested bacteria and their role in bacterial persistence, they are as yet poorly characterized. Our goal was to quantitatively study this phase and analyze the consequences of growth arrest. We found that, even while growth-arrested by starvation, bacteria continued to produce proteins at a surprisingly constant rate over several days. Our identification of this newly observed period of constant activity in non-growing cells, designated as constant activity stationary phase (CASP), makes possible the conduction of assays on growth arrested bacteria in reproducible and constant conditions. Finally, we show that transient growth-arrest can be selected by evolution to face stressful conditions such as antibiotics.

סגל וסטודנטים מוזמנים להשתתף