Instituto de Medicina Molecular João Lobo Antunes

Master Project Proposal

Title: Fighting bacteria using innovative eradication techniques

Synopsis:

In our lab we are committed to fight bacteria that are serious health threats. Most of these bacteria shelter in biofilms, i.e. communities of bacteria inserted in a matrix of biomacromolecules they produce.
Chasing bacteria in these shelters is a demanding endeavor as innovative antibiotics are needed: able to diffuse in the crowded biomolecular medium and able to kill bacteria, even if they are in a dormant state.
We are seeking for enthusiastic and focused students with determination to help to develop a new generation of antibiotics.

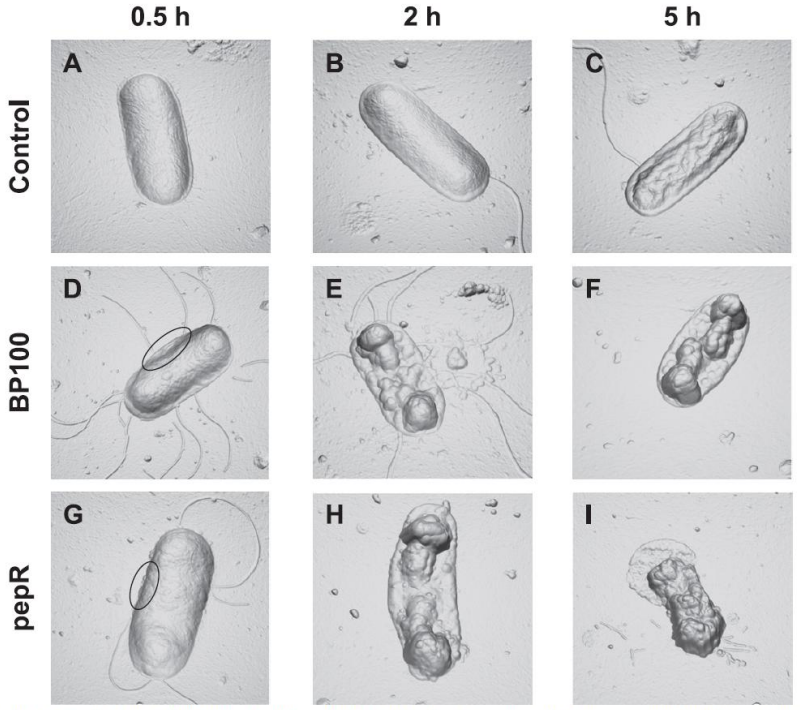

FIGURE 3. **Time dependence of AMP effects on *E. coli* imaged by AFM.** *A–I*, three-dimensional orthogonal projection images (derived from the height data) of untreated *E. coli* cells (*top row*), and *E. coli* cells treated with 3 μM BP100 (*middle row*), and 5 μM pepR (*bottom row*). Images were acquired following the treatment of the bacterial cells for 0.5 h (*first column*), 2 h (*second column*), and 5 h (*third column*). Total scanning area for each image: $4 \times 4\ \mu m^2$. See the text for a description of the highlighted areas.

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Bibliography:

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