Researchers discover antibiotic combinations that reduce Staphylococcus aureus clearance
14 November 2022

Systematic quantification of pairwise drug interactions reveals emergent reciprocal suppression in long-term population clearance. **a**, Cell viability over time after antibiotic treatment was measured by high-throughput microplating and automated image analysis of a mixed DsRed- and GFP-tagged S. aureus strain. Example data are shown for treatment with CLI ($n = 6$ wells; fivefold serial dilution microplate images are shown for one replicate at one time point). **b**, Schematic of directional interactions. Contrasting survival after a combined treatment with two drugs, A and B, at a fixed cidal concentration (Supplementary Table 1, gray bars, $S_{A,B}$); the survival under drugs A and B alone at the same or double the concentration ($S_{A(1)}$, $S_{A(2)}$ (purple bars); $S_{B(1)}$, $S_{B(2)}$ (orange bars)) defines two-directional interaction scores for the effect of drug B on drug A (B?A, left color scale) and the effect of A on B (A?B, right color scale). The combined effect could be synergistic ($S_{A,B}$).
