

**Figure S1.** Tobramycin and vancomycin exposure via antibiotic administration methods to the system at 2, 12, 24 and 48 hrs. N= 4 replicates for Spacerv+t and CSBv+tplusSpacerv+t and 3 for VP; mean ± SE. (\* P < 0.05, \*\* P < 0.01).