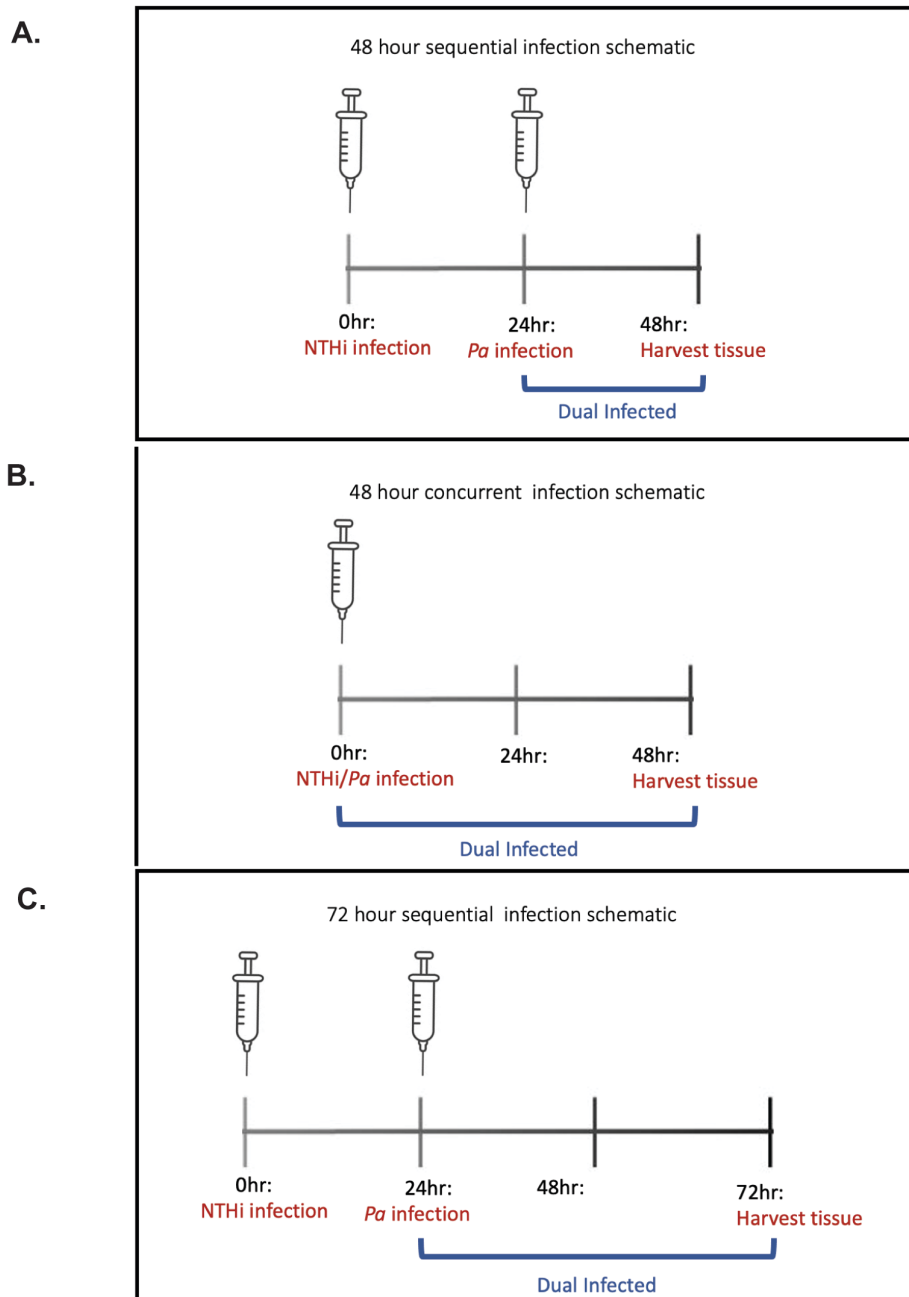
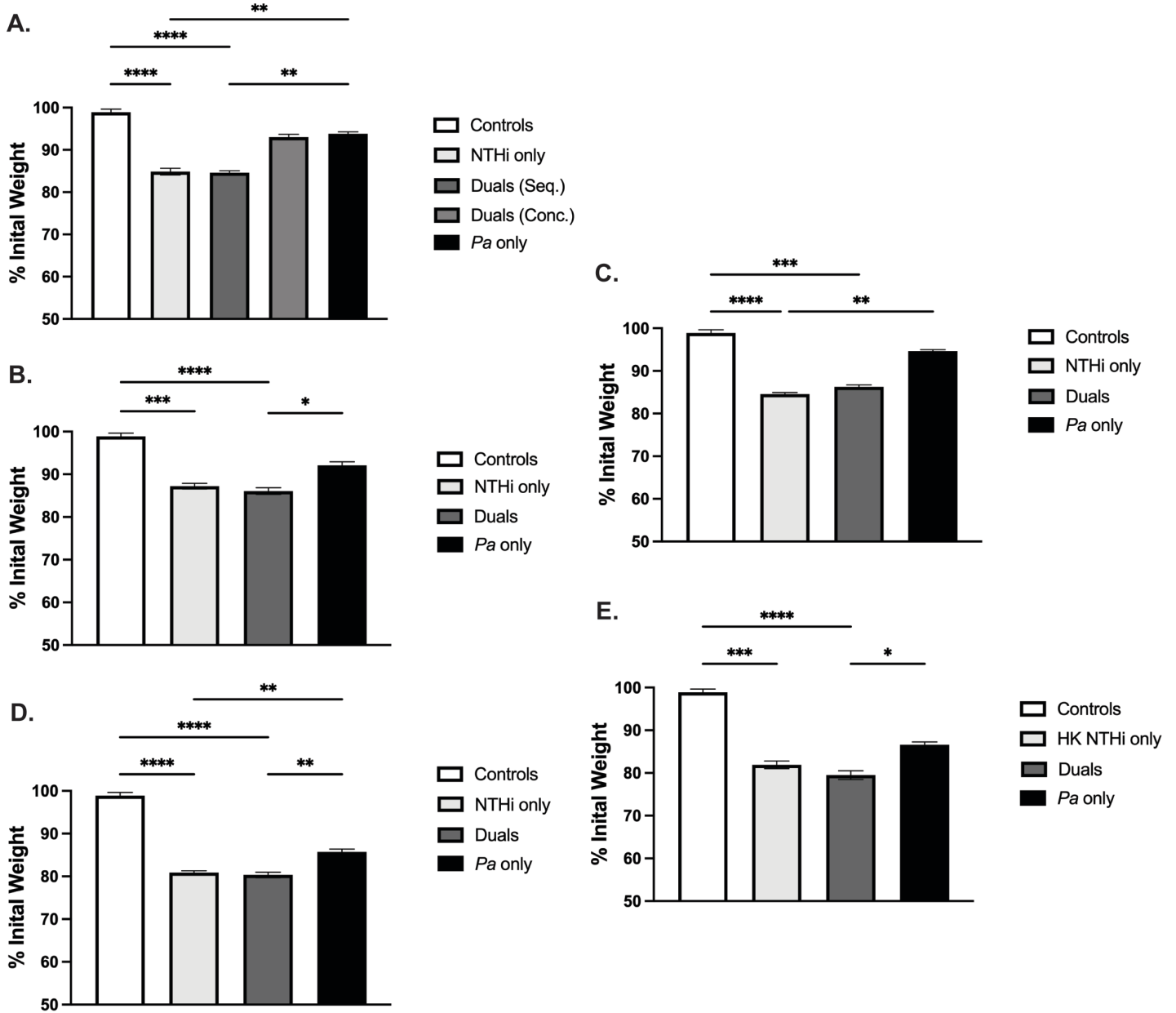


**Fig. S1: Quantification of nontypeable *H. influenzae* and *P. aeruginosa* polymicrobial biofilms.** To quantify fluorescently tagged strains, A) viable colony counts of single-species NTHi 86-028NP-gfp+ and mPA 08-31-mCherry+ static biofilms were seeded at  $\sim 10^8$  and counted at various timepoints. B) Bacterial counts of *Pa* from single- and dual-species static biofilms. Dual counts depict *Pa* growth after pre-seeding with NTHi. Antibiotic resistant strains of NTHi, including C) NTHi 86-028NP<sub>r</sub> and D) NTHi HI-1<sub>r</sub> were quantified with and without the presence of mPA 08-31. Mean  $\pm$  SEM. (N = 4-5). Dotted line = inoculum. Unpaired t-test, two-tailed, \*\*P<0.01.



**Fig. S2: Timelines of murine infection with nontypeable *H. influenzae* and/or *P. aeruginosa*.**

These timelines describe intratracheal infections of BALBc/J mice. A) NTHi sequentially preceding *Pa* by 24 hours, followed by 24 hours of dual infection (48 hour total infection time). B) NTHi concurrently introduced with *Pa* for 48 hours total infection time. C) NTHi sequentially preceding *Pa* by 24 hours, mice were euthanized after 48 hours (72 hour total infection time).



**Fig. S3: Weight change following nontypeable *H. influenzae* and *P. aeruginosa* infection.**

Percentage of initial weight was calculated for all animal infections with weight change compared to uninfected controls. A) Weight change at 48 hours post-infection with NTHi HI-1r and mPA 08-31. B) Weight change at 72 hours post-infection with NTHi 86-028NPr and mPA 08-31. C) Weight change at 72 hours post-infection with NTHi HI-1r and *Pa* FRD1*mucA*+. D) Weight change at 72 hours post-infection with NTHi HI-1r and mPA 08-31. E) Weight change at 72 hours post-infection with heat-killed NTHi HI-1r and mPA 08-31. (N = 10-15). Mean  $\pm$  SEM. Kruskal-Wallis with Dunn's multiple comparison test, \* P<0.05, \*\* P<0.01, \*\*\* P<0.001, \*\*\*\* P<0.0001.