Fig. S1

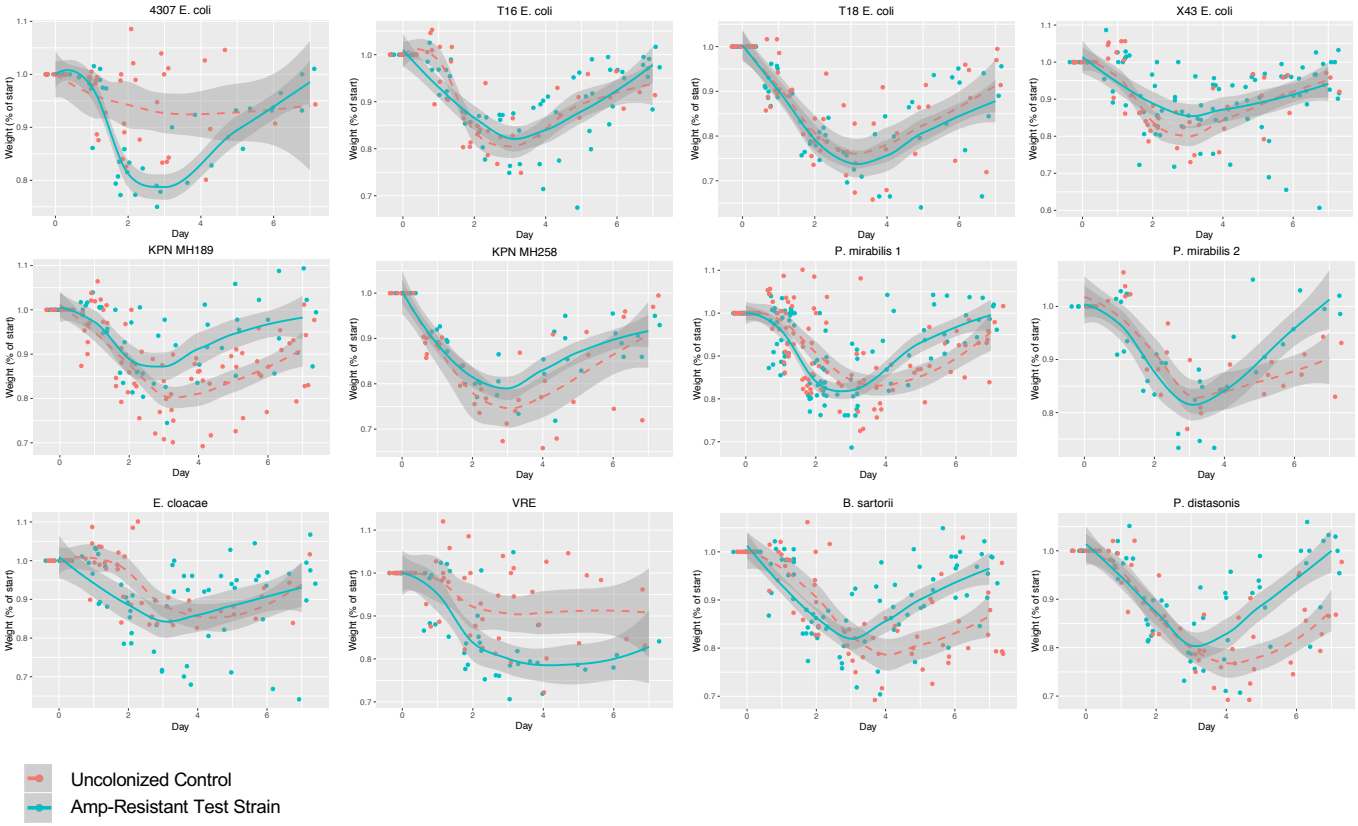
4307 E. coli
T16 E. coli
T18 E. coli
X43 E. coli
KPN MH189
KPN MH258
P. mirabilis 1
P. mirabilis 2
E. cloacae
VRE
B. sartorii
P. distasonis
Weight (% of start)
Day
Uncolonized Control
Amp-Resistant Test Strain

Fig. S2

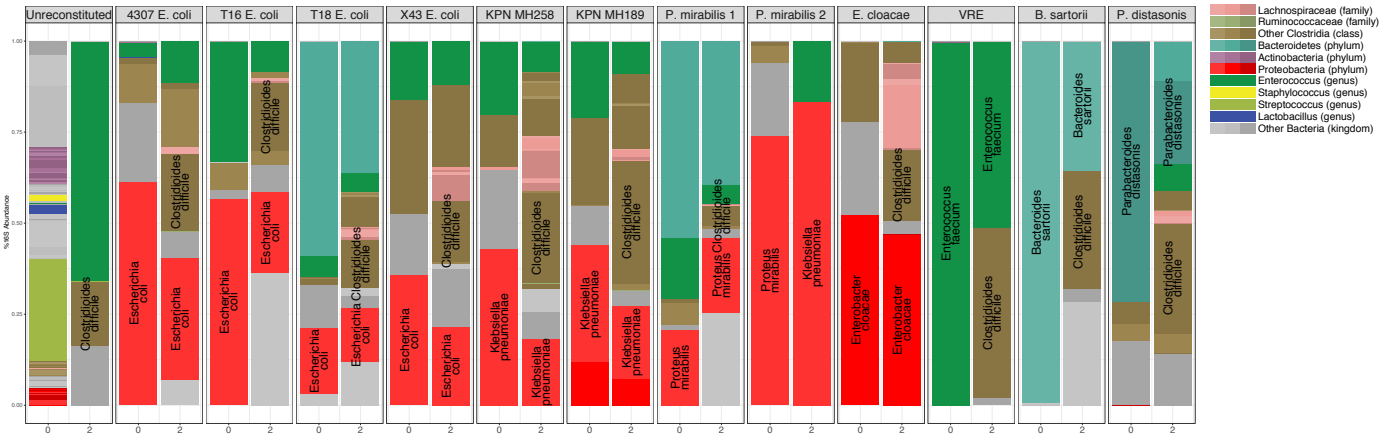
Unreconstituted
4307 E. coli
T16 E. coli
T18 E. coli
X43 E. coli
KPN MH258
KPN MH189
P. mirabilis 1
P. mirabilis 2
E. cloacae
VRE
B. sartorii
P. distasonis
% 16S Abundance
Lachnospiraceae (family)
Ruminococcaceae (family)
Other Clostridia (class)
Bacteroidetes (phylum)
Actinobacteria (phylum)
Proteobacteria (phylum)
Enterococcus (genus)
Staphylococcus (genus)
Streptococcus (genus)
Lactobacillus (genus)
Other Bacteria (kingdom)

Fig. S3

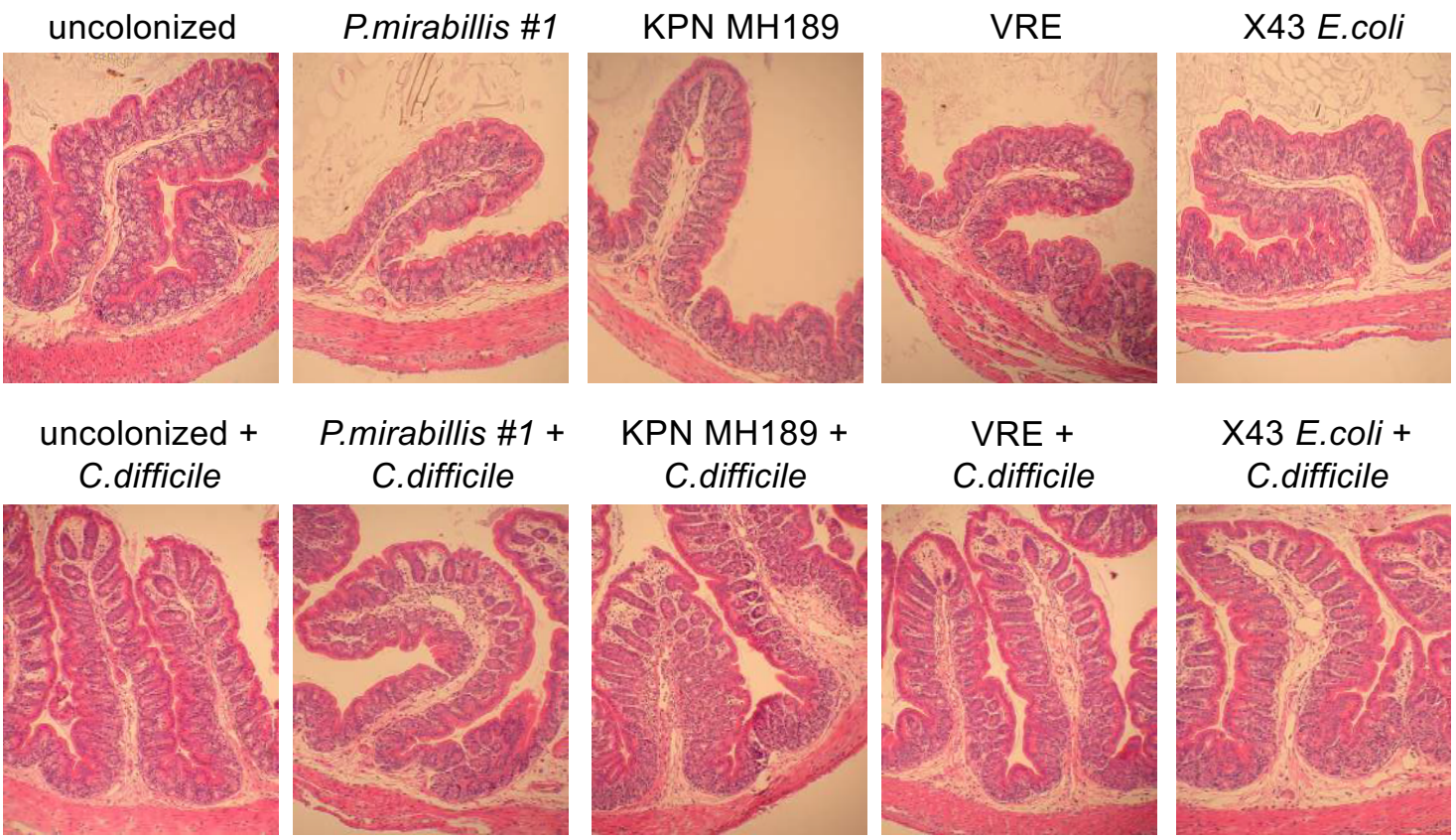
uncolonized
P.mirabillis #1
KPN MH189
VRE
X43 *E.coli*
uncolonized + *C.difficile*
P.mirabillis #1 + *C.difficile*
KPN MH189 + *C.difficile*
VRE + *C.difficile*
X43 *E.coli* + *C.difficile*

Fig. S4

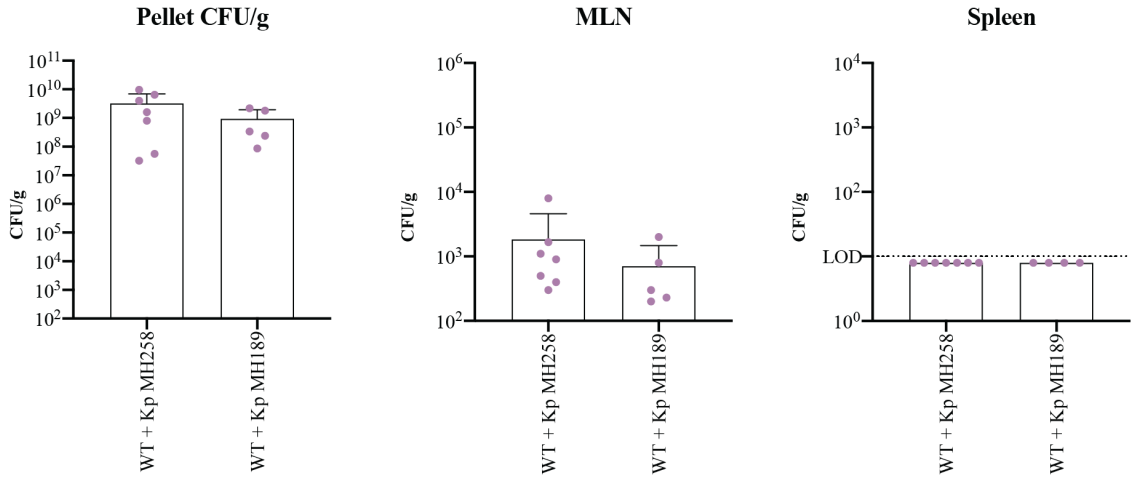
Pellet CFU/g
CFU/g
10^{11}
10^{10}
10^{9}
10^{8}
10^{7}
10^{6}
10^{5}
10^{4}
10^{3}
10^{2}
WT + Kp MH258
WT + Kp MH189
MLN
CFU/g
10^{6}
10^{5}
10^{4}
10^{3}
10^{2}
WT + Kp MH258
WT + Kp MH189
Spleen
CFU/g
10^{4}
10^{3}
10^{2}
LOD
10^{0}
WT + Kp MH258
WT + Kp MH189

Figure S1. Influence of the residual microbiota on weight loss following CDI.

C57BL/6 mice were infected with 200 spores of *C. difficile* (VPI10463 strain) following ampicillin pretreatment and were assessed for weight loss and recovery following infection. Data representative of 17 independent experiments.

Figure S2. Changes in mouse microbiota composition following *C. difficile* infection.

C57BL/6 mice were infected with 200 spores of *C. difficile* (VPI 10463 strain) following MNV and ampicillin pretreatment. DNA was extracted from fecal pellets and subjected to 16S rRNA PCR amplification and sequencing of the V4-V5 region. The average relative abundance of bacterial taxa for all mice of the same group is plotted both on day 0 and day 2 post infection.

Figure S3. Residual microbiota did not impact tissue histology following CDI.

C57BL/6 mice were infected with 200 spores of *C. difficile* (VPI 10463 strain) following MNV and ampicillin pretreatment and euthanized 2 days later. Pictured are representative H&E-stained cecal sections from antibiotic-treated mice colonized with different ampicillin-resistant bacterial strains in the presence or absence of *C. difficile* infection.

Figure S4. *K. pneumoniae* MH189 dissemination in the absence of *C. difficile*

C57BL/6 mice were treated with ampicillin for 4 days and inoculated with $1x10_3$ CFUs of *K. pneumoniae* MH189 and MH258 via oral gavage. Fecal, mLN and spleen samples were collected 3 days post inoculation and CFUs were quantified by plating on selective agar.