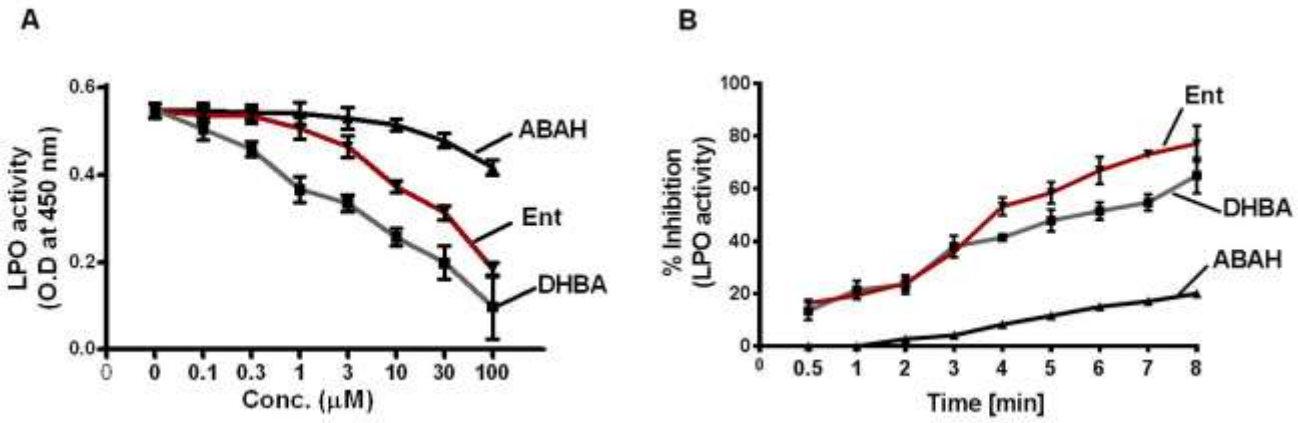
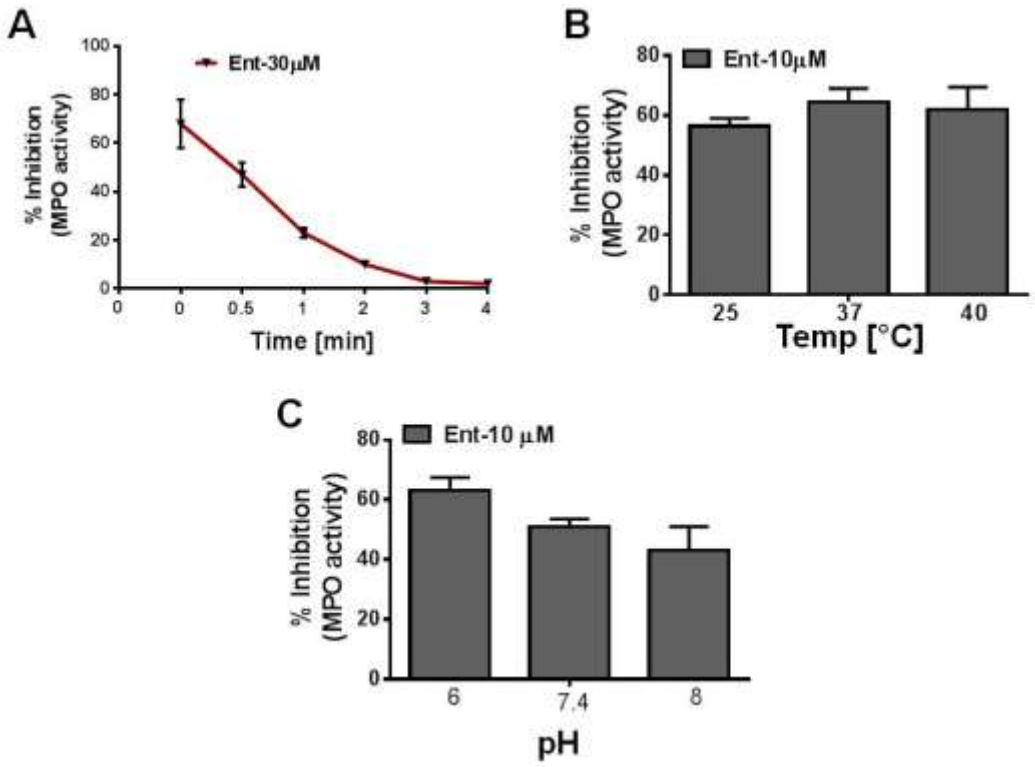
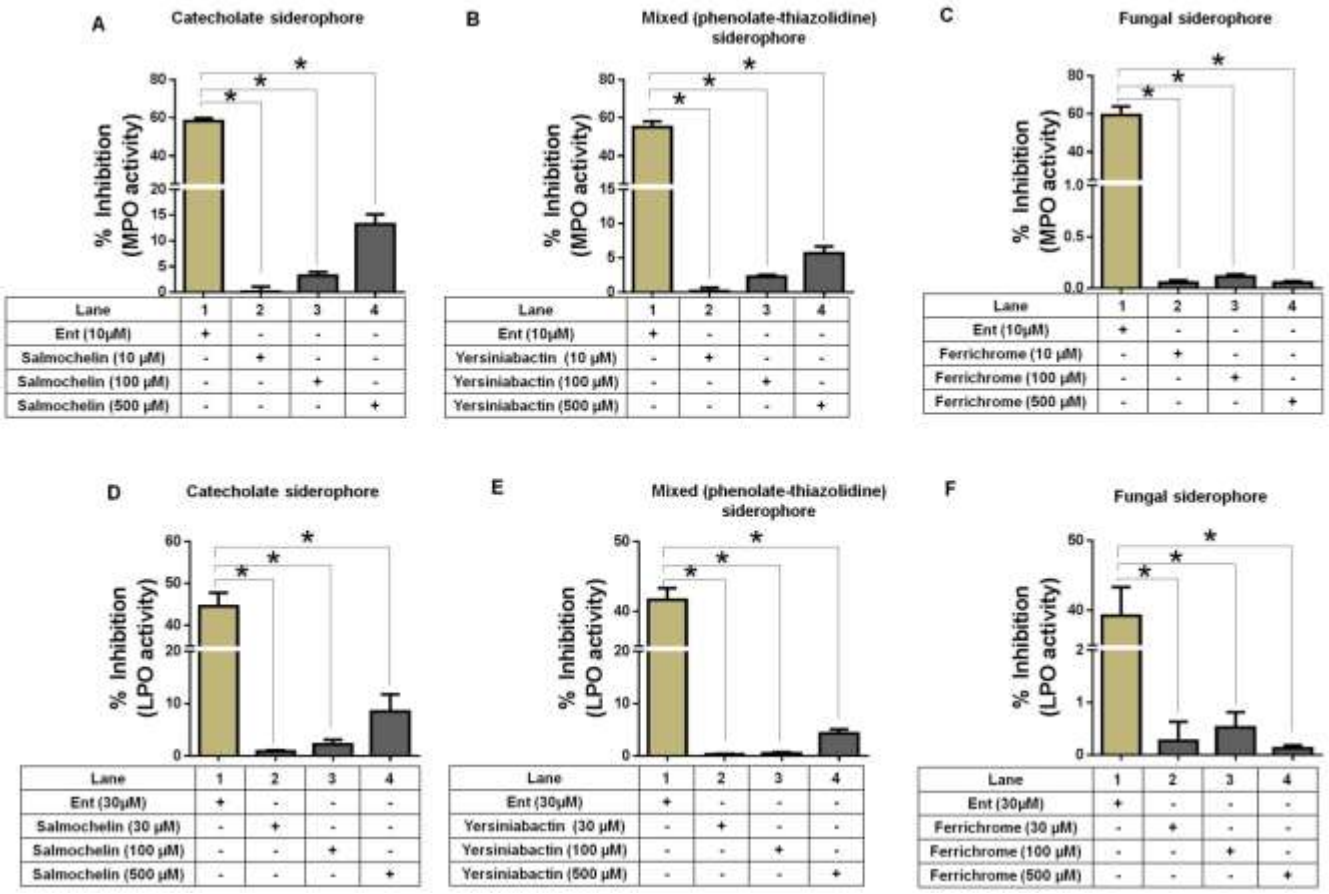
Supplementary Information



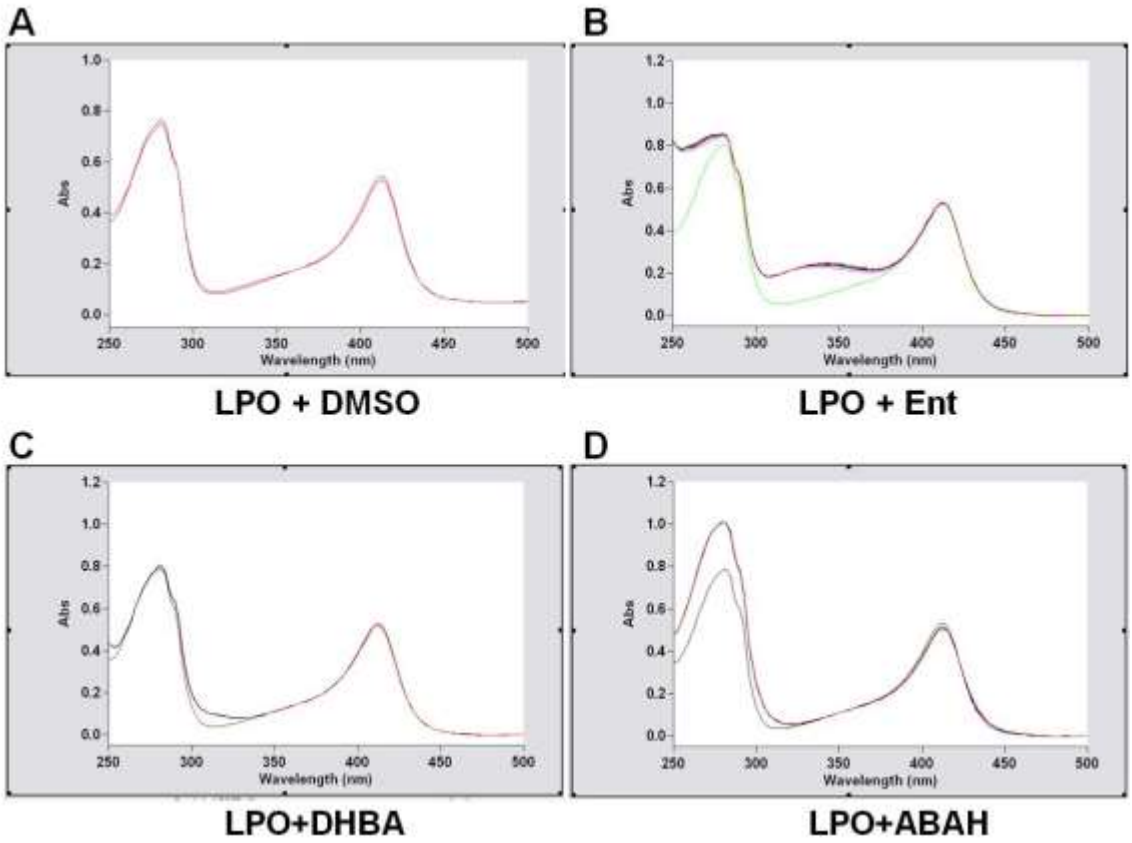
Supplementary Figure 1. Ent inhibits LPO activity in a dose- and time-dependent fashion. Various concentrations of Ent, DHBA or ABAH were pre-incubated for 10 min with LPO (50 µg/mL) at different time points, and LPO activity was measured using guaiacol (100 mM) and H_2O_2 ($6.7x10^{-3}$). Line graph represents **A)** Dose response curve (0.1-100 µM) and **B)** Time kinetics (0.5-8 min) of LPO inhibition by 30 µM of Ent, DHBA or ABAH. Results are expressed as mean ± SEM and representative of 6 independent experiments.



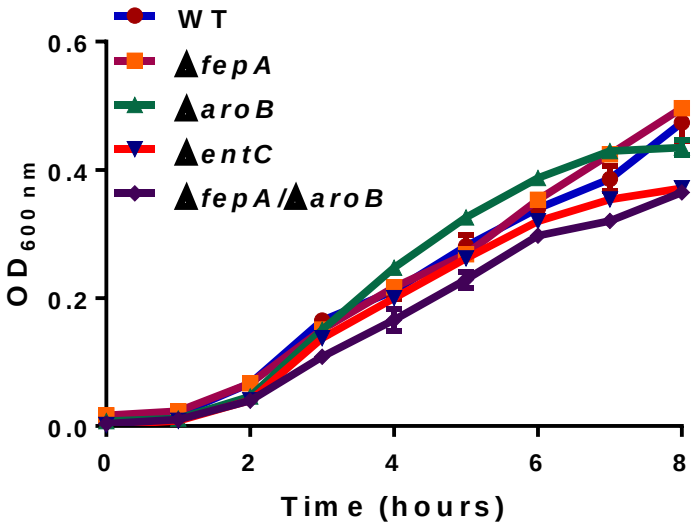
Supplementary Figure 2. Ent inhibits ongoing MPO catalyzed reaction at a broad range of temperatures and pH. A) Line graph represents % inhibition of MPO activity by Ent (30 μM) added at various time points after initiation of the MPO reaction. Bar graphs represent effect of **B)** temperature and **C)** pH on Ent-mediated MPO inhibition. Results are expressed as mean ± SEM and representative of four independent experiments.



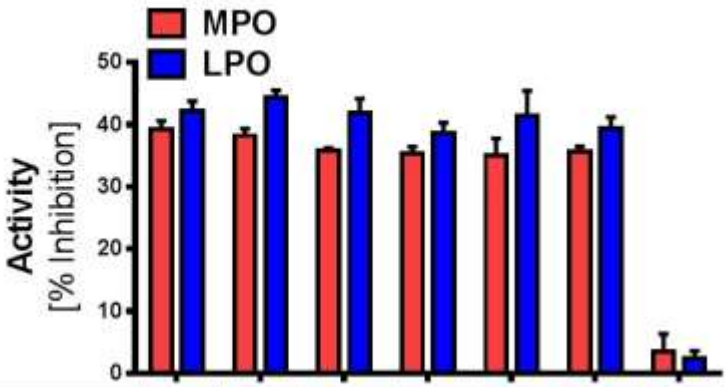
Supplementary Figure 3. Non-catecholate siderophore failed to inhibit MPO activity. Various concentrations of Ent, Salmochelin and yersiniabactin were pre-incubated with MPO (100 mU) or LPO (50 µg/mL) for 10 min and then enzyme activity was measured by 100mM guaiacol assay. **A-C)** Bar graphs represent % inhibition of MPO activity by **A)** Salmochelin, **B)** Yersiniabactin and **C**) Ferrichrome. **D-F**) Bar graphs represent % inhibition of LPO activity by **D)** Salmochelin, **E)** Yersiniabactin and **F**) Ferrichrome. Results are expressed as mean ± SEM. *p<0.05, unpaired t test.



Supplementary Figure 4. Ent, DHBA, and ABAH do not alter LPO spectra in absence of H_2O_2. A-D) Spectral analysis of LPO (2.6 nM, in 0.1M phosphate buffer) was performed in presence of Ent (30 µM), DHBA (30 µM), or ABAH (30 µM). The reaction was initiated by the addition of 30 µM H_2O_2. Spectra (250-500 nm) were recorded up to 3 min. Each spectrum is an average of 3 scans taken in 1.0 second. Image displays the spectra of A) LPO + DMSO, B) LPO + Ent (30 µM), C) LPO + DHBA (30 µM) and D) LPO + ABAH.

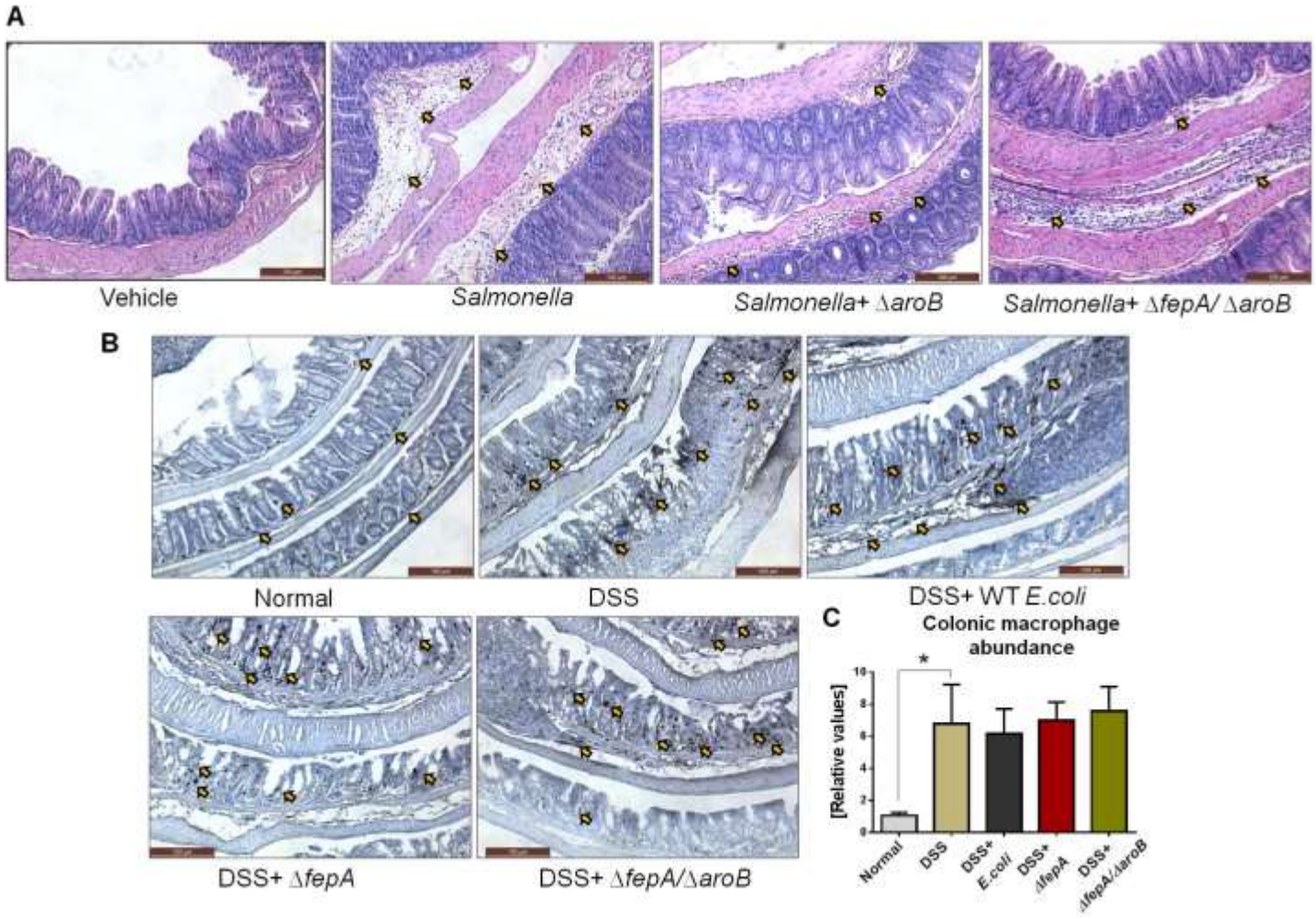


Supplementary Figure 5. Growth of wild-type *E. coli* and its isogenic mutants were comparable in LB medium. Bacterial cultures were grown overnight in LB media at 37°C. Subsequently, equal number of bacteria was grown in fresh LB media in triplicates and the $OD_{600\ nm}$ was recorded at one hour interval.



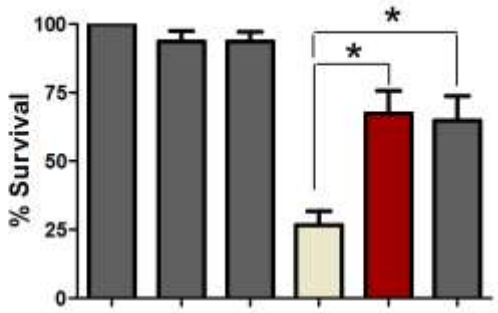
Lane	1	2	3	4	5	6	7
Δ*fepA* (Fresh)	+	-	-	-	-	-	-
Δ*fepA* (-80°C)	-	+	-	-	-	-	-
Δ*fepA* (-80°C) freeze thaw 3X	-	-	+	-	-	-	-
Δ*fepA* (4°C)	-	-	-	+	-	-	-
Δ*fepA* (RT, ~25°C)	-	-	-	-	+	-	-
Δ*fepA* (37°C)	-	-	-	-	-	+	-
Δ*fepA* (Boiled)	-	-	-	-	-	-	+

Supplementary Figure 6. Ent-overproducing *E. coli* (Δ*fepA*) supernatant is stable at various temperatures except boiling. Supernatant obtained from overnight grown Δ*fepA* mutant were stored for 24h at -80°C, 4°C, room temperature (~25°C), and 37°C or freeze thawed three times or boiled for 5 min. Subsequently its MPO and LPO inhibitory activity was analyzed. Bar graph represents percent inhibition of MPO and LPO activity. Results are expressed as mean ± SEM and representative of 3 independent experiments. *$p<0.05$, unpaired t test.



Supplementary Figure 7. Experimental colitis remains unaltered in mice given Ent-overproducing *E. coli*. Cecum and colon from *Salmonella*-induced gastroenteritis and DSS-induced colitis respectively subjected to H&E staining and immunohistochemistry. **A)** Representative images of hematoxylin and eosin stained sections obtained from the cecum of all groups. Arrows indicates the infiltration of immune cells. Scale bar = 100 µm. **B)** Representative images of Swiss roll sections made from colon, immunostained with macrophage specific antibody F4/80. Arrows denote the macrophage infiltration in colonic tissue. Scale bar = 100

μm. The total number of F4/80 positive cells per slide was manually counted within a field viewed at 100X magnification under light microscope. C) Bar graph showing relative abundance of macrophages in control and treated group (n=5). All sections were photographed at 100X magnification with the same exposure time. Results are expressed as mean ± SEM. *p<0.05, unpaired t test.



Lane	1	2	3	4	5	6
Vehicle control	+	-	-	-	-	-
LPO-50μg/mL	-	+	-	-	-	-
H_2O_2-30μM	-	-	+	-	-	-
LPO + H_2O_2	-	-	-	+	+	+
Ent-30μM	-	-	-	-	+	-
DHBA-100μM	-	-	-	-	-	+

Supplementary Figure 8. Ent rescues LPO-H_2O_2-mediated bacterial killing *in vitro.* WT *E. coli* grown in LB medium were re-suspended in PBS and then incubated with LPO (50 μg/mL) and H_2O_2 (30 μM) with or without Ent or DHBA for 30 min. Bar graph represents % survival of WT *E. coli*. Results are expressed as mean ± SEM and representative of 3 independent experiments. *p< 0.05, unpaired t test.