Supporting Information

**Reporter Gene-Based Optoacoustic Imaging of *E. coli* Targeted Colon Cancer *In vivo***

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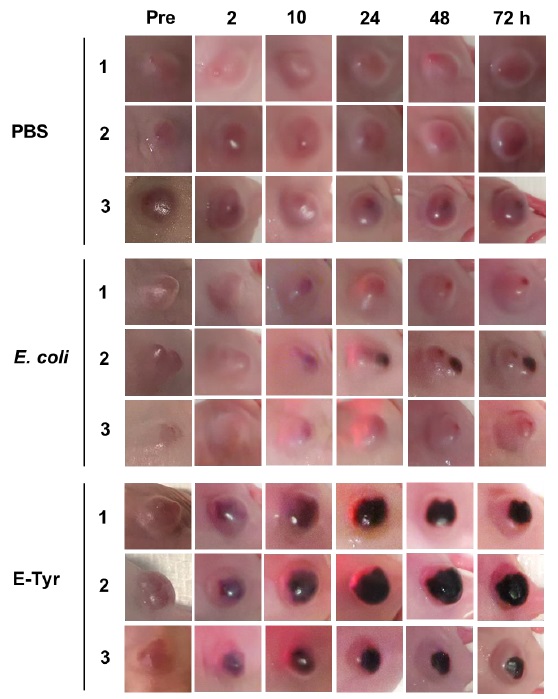
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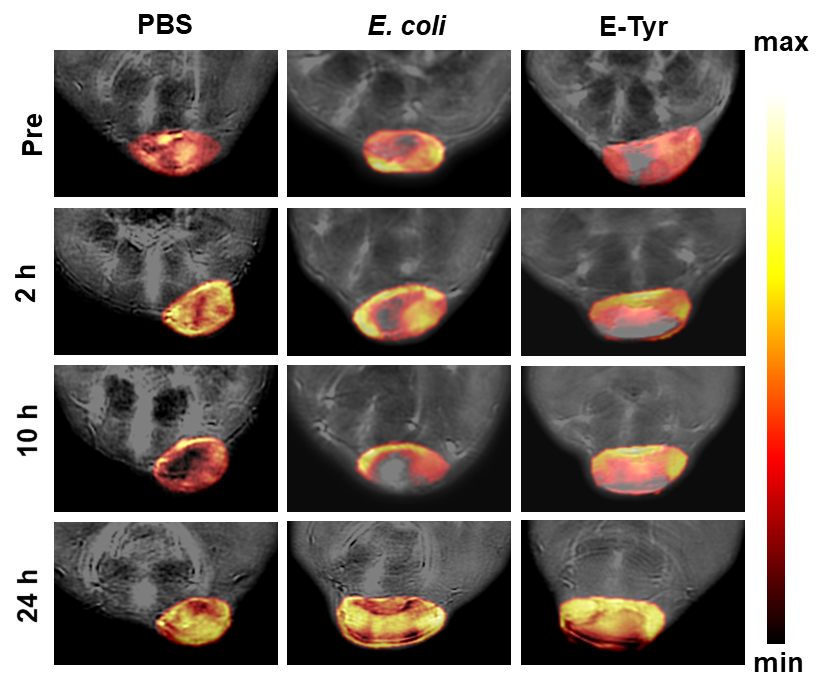
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**Figure S1.** Photographs of representative tumors in each group were taken before (pre) and after injection (indicated times).

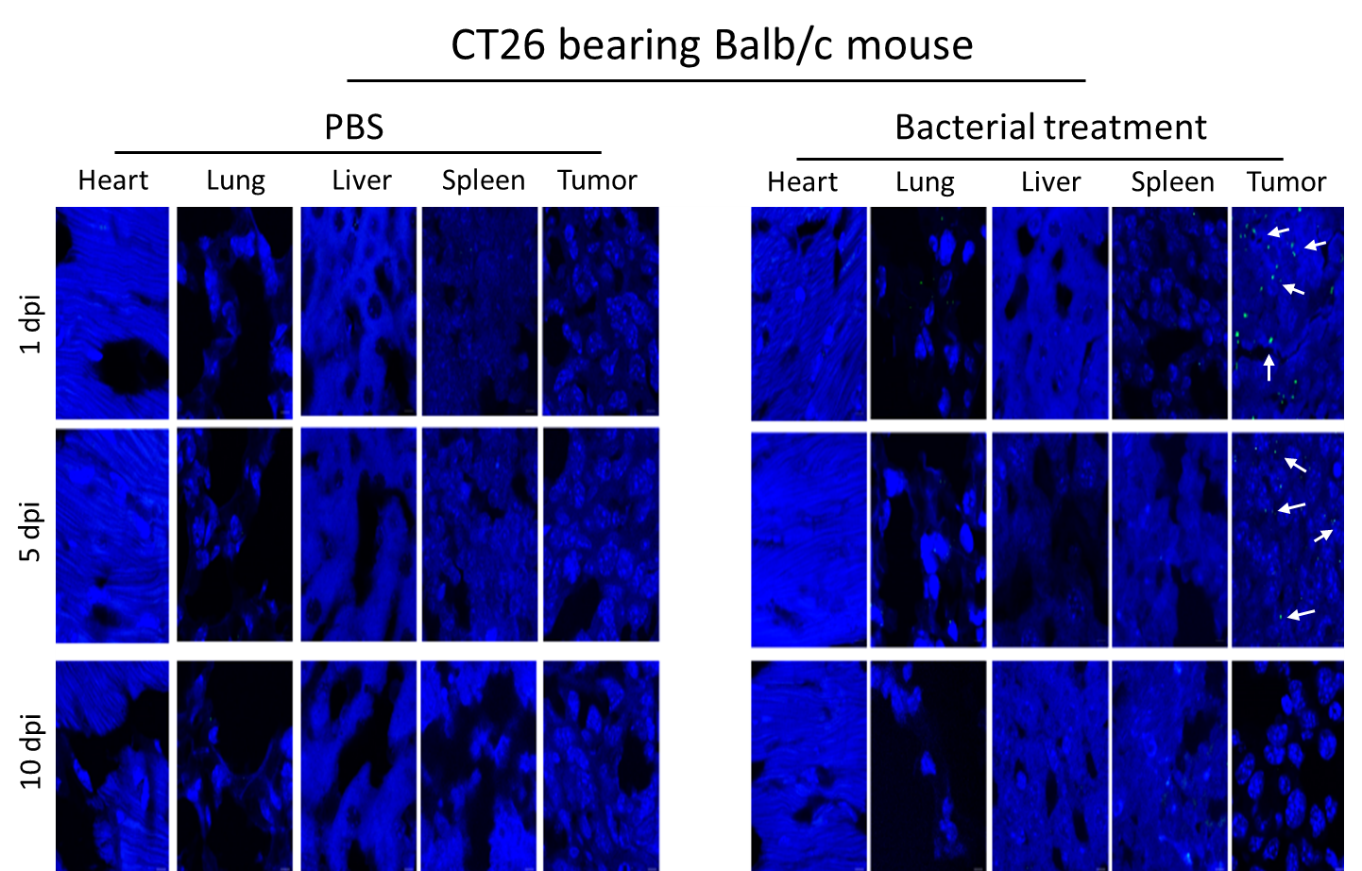


**Figure S2.** Representative images of tumors showing the spatial distribution of oxygen saturation at different time intervals.

(A)



(B)

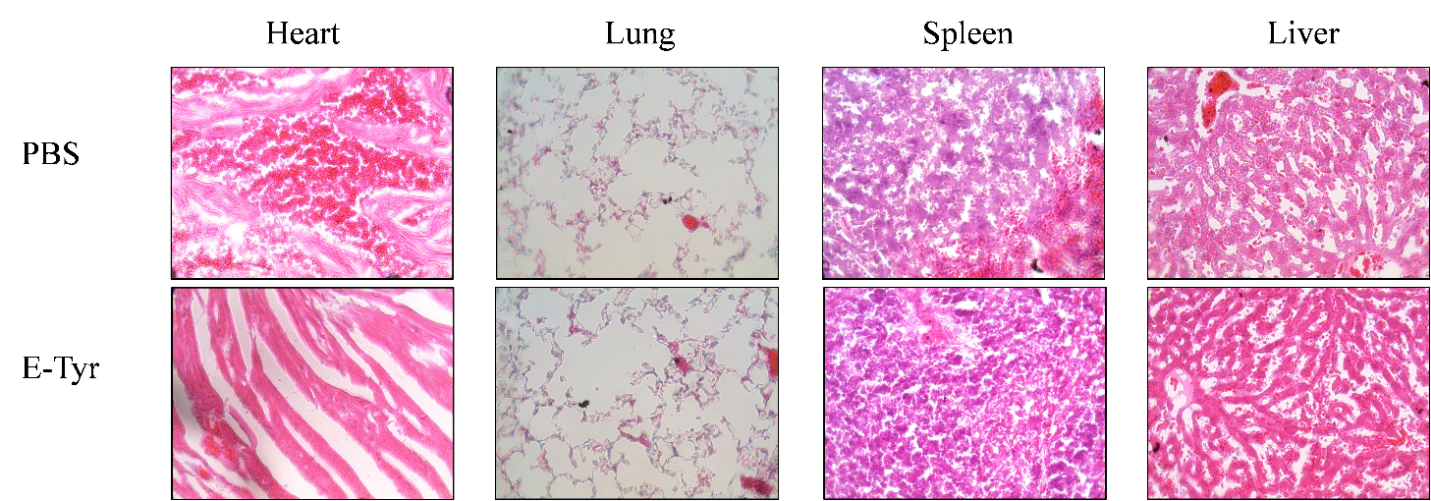
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**Figure S3. Bacterial colonization in CT26 tumor-bearing Balb/c mice.** CT26 tumor-bearing competent mice received 108 cfu of E-Tyr through intravenous injection. Heart, lung, liver, spleen, and tumor tissues were harvested for further experiments. **(A)** Viable bacterial cell number was counted and **(B)** immunofluorescence staining was performed by using an anti-E.coli antibody (green) and DAPI (4, 6-diamidino-2-phenylindole) (blue) for nuclei staining at the indicated time points (n=3 mice/group**).**

(A)



(B)



**Figure S4. Effect of E-tyr on survival and long-term toxicity of mice**. Competent Balb/c mice or immunocompromised Balb/c athymic nu-/nu- mice received 108 cfu of E-Tyr/mouse through intravenous injection (n=3 per group). **(A)** Survival of bacteria-infected mice as monitored for over one month and **(B)** H&E staining (40X) of normal tissue sections at day 5 after bacterial injection.