

**Impact of Developmental Age, Necrotizing Enterocolitis Associated Stress, and Oral
Therapeutic Intervention on Mucus Barrier Properties**

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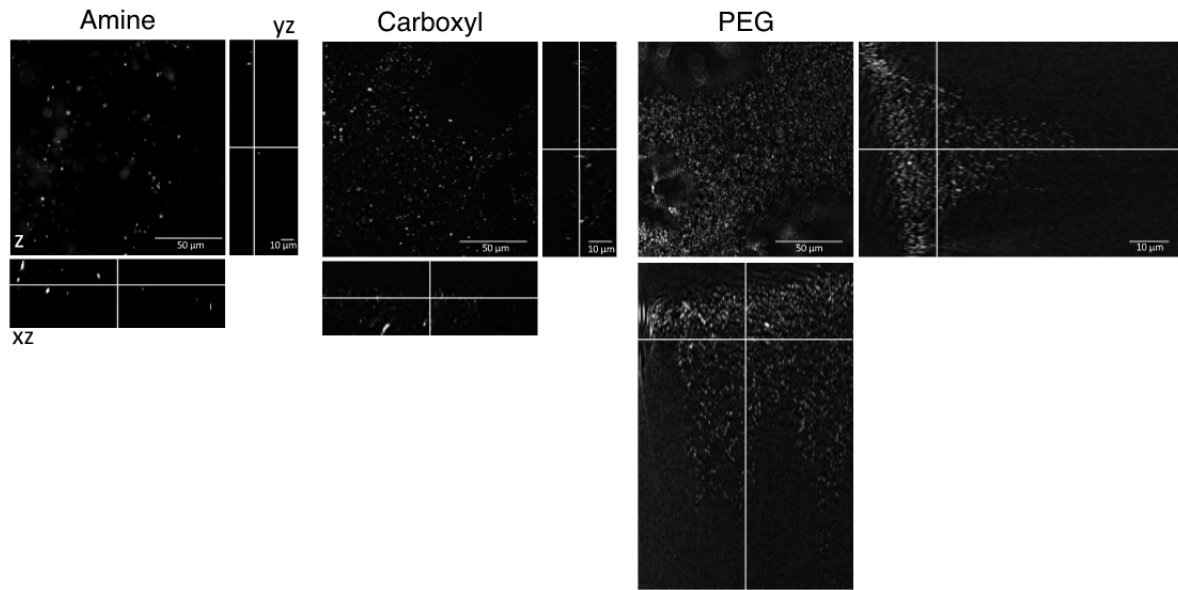
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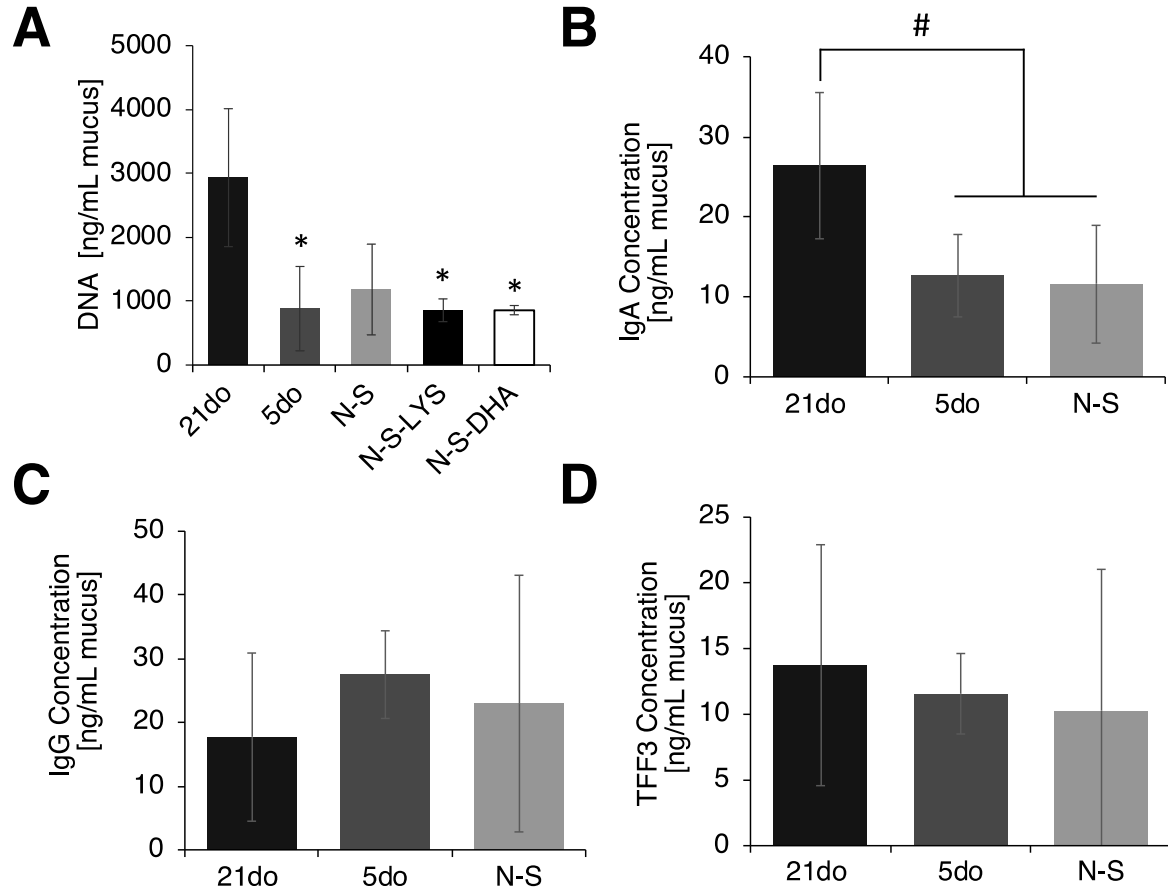
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Supplemental Information:



Supplementary Fig S1: Representative Z stack of amine-, carboxyl-, and PEG- modified particles in mucus 10 mins after adding particles to the mucosal surface. Images show a single Z slice (z) with corresponding orthogonal views (xz and yz). Intersection of lines designate the point in the z-stack that is being projected in the orthogonal view.



Supplementary Fig S2: (A) DNA amount per volume of mucus collected from 21do, 5do, NEC-stressed (N-S), NEC-stressed and orally dosed with LYS (N-S-LYS), and NEC-stressed and orally dosed with DHA (N-S-DHA) tissue. (B) Immunoglobulin A (IgA), (C) Immunoglobulin G (IgG), and (D) Trefoil factor 3 (TFF3) amount per volume of mucus collected from 21do, 5do, and N-S pups. ANOVA was used to determine significance in (A) * $p < 0.05$ comparing 21do to 5do, N-S-LYS, and N-S-DHA, and in (B) # $p < 0.05$ comparing 21do to 5do and N-S.