Supplemental Figure Legends:

Supplemental Figure 1: TEM of AgNPs. (A) 20 nm AgNP (21.92 ± 3.03 nm, N=20) (B) 100 nm AgNPs (91.07 ± 6.54 nm, N=20)

Supplemental Figure 2: Dissolution of 20 nm and 100 nm AgNPs. Dissolution of 20nm and 100nm with various BC was measured after 24 hours incubation at 37 $^{\circ}$ C in unsupplemented DMEM/F12. Dissolution in the supernatant was statistically different compared to uncoated NPs (p<0.05, N=3).

Supplemental Figure 3: Viability at 24 hours following AgNP exposure. Viability study of RAEC exposed to 20nm or 100nm AgNP with various BC for 3hrs. Media was changed after exposure and an MTS assay was performed after 24 hrs. *-one way Anova, statistically significant compared to ctrl (p<0.05) N=3.

Supplemental Figure 4: Hyperspectral overlay of internalized AgNPs: Hyperspectral overlay of AgNPs internalized with various BC. A minimum of 1000 pixels were selected to generate the mean spectral profiles.

Supplemental Figure 1:



Supplemental Figure 2:

A





Supplemental Figure 3:





Supplemental Figure 4: