

1 **Supplementary Information**

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3 Inhibition of cytomegalovirus infection and photothermolysis of infected cells using
4 bioconjugated gold nanoparticles

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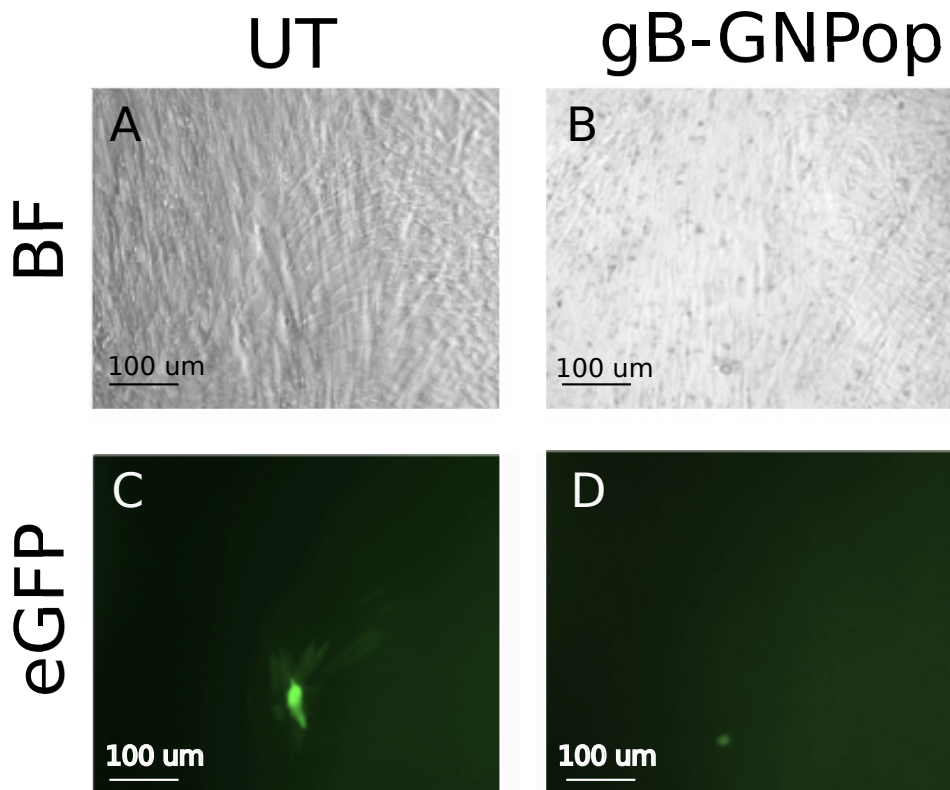
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17 **Supporting Figures**

18 **Extended data 1.** Effect of gB-GNPop treatment on CMV (Towne) low MOI infection of
19 HF. gB-GNPop (50 ng antibody total) were added to HF one day after infection or the
20 cells were mock treated (UT). Bright-field (BF) (A, B) or eGFP fluorescence (C,D)
21 images were recorded at 5 dpi. Spread of virus-encoded eGFP to cells surrounding
22 primary infected cells is evident in UT cells (C) whereas this expression is limited to
23 primary infected cell in gB-GNPop treated cells (D).

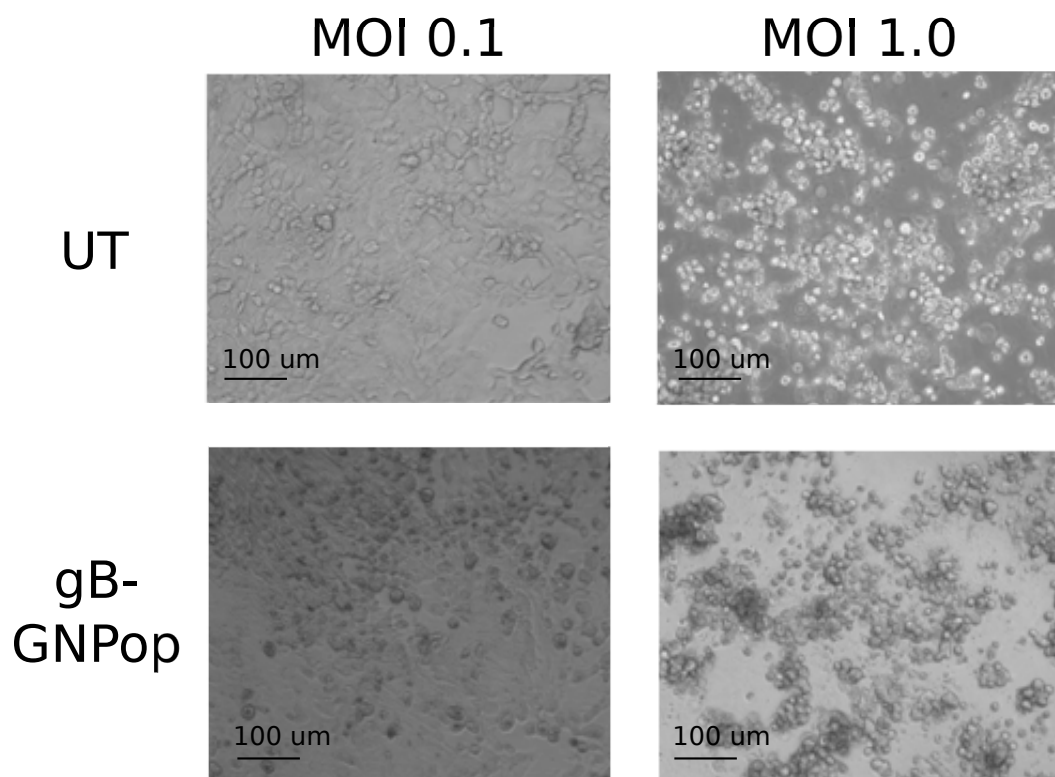


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26 **Extended data 2.** Effect of gB-GNPop treatment on simian CMV infection of HF. gB-
27 GNPop were tested for their efficacy to block SCMV infection of HF cells. gB-GNPop
28 (50 ng antibody total) were added to HF at the time of infection at a low (0.1) or high
29 (1.0) multiplicity of infection (MOI), or the cells were mock treated (UT). Phase contrast
30 micrographs showing cytopathogenic effect were recorded at 48 hpi.

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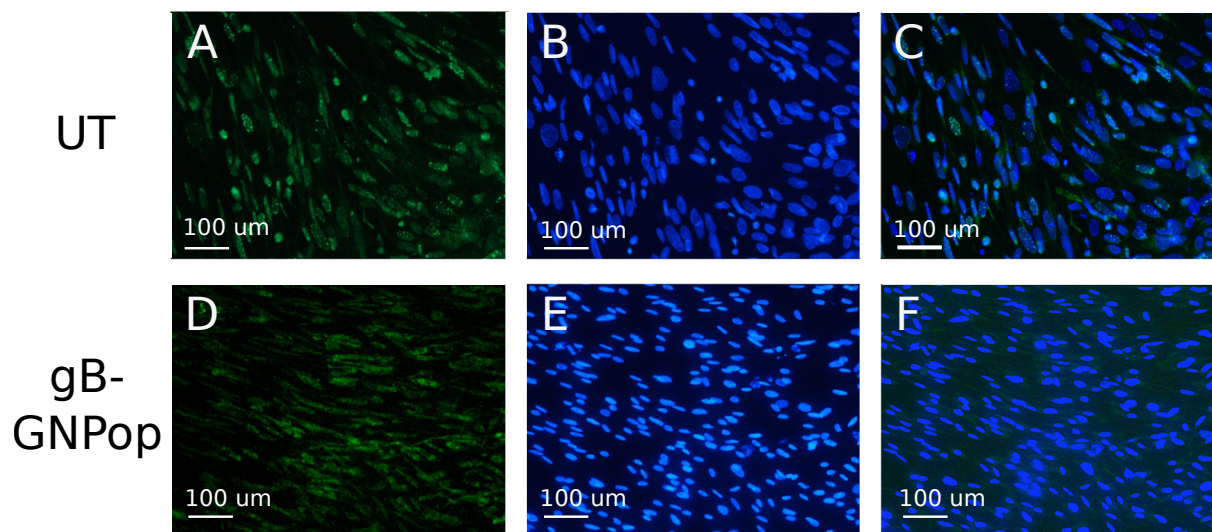


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34 **Extended data 3.** Effect of gB-GNPop treatment on HSV-1 infection of HF. gB-GNPop
35 (50 ng antibody total) were added to HF at the time of infection with HSV-1 (K26GFP
36 virus) at a MOI of 1.0, or the cells were mock treated (UT). Fluorescence was recorded
37 at 48 hpi in the GFP (A, D) and Hoechst (B, E) channels, and then images were
38 overlaid (C, F). The eGFP signal emanates from the virus genome.

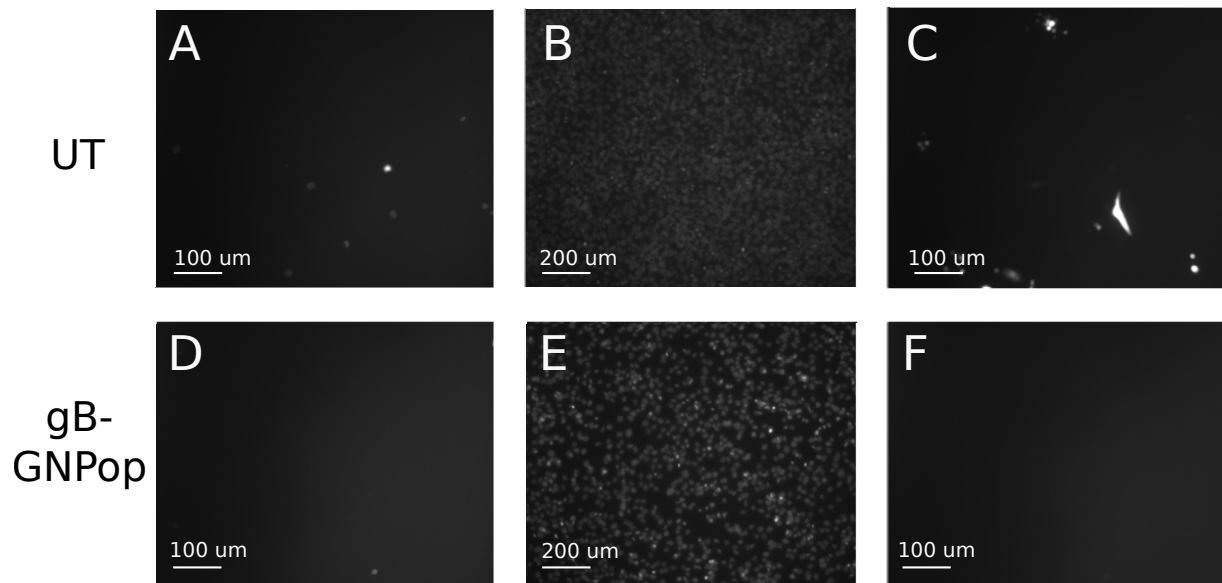
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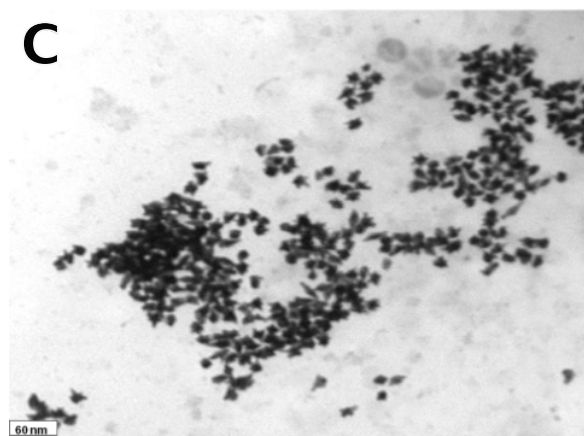
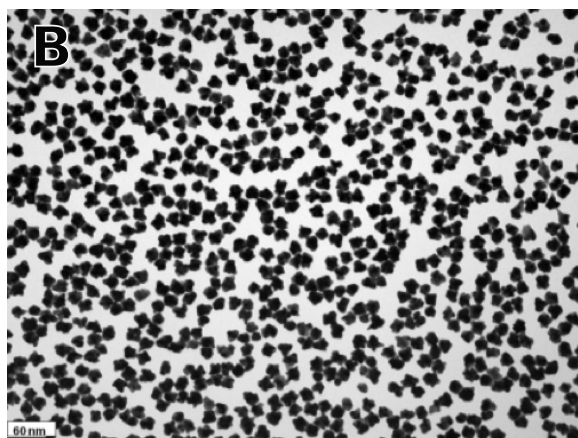
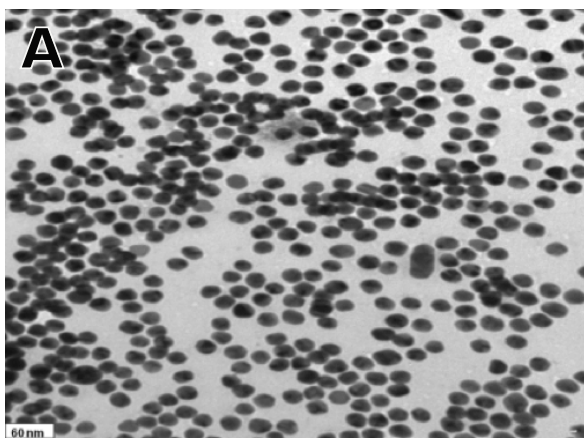
42 **Extended data 4.** Effect of gB-GNPop treatment on CMV (FIX strain) infection of
43 HMEC-1 cells. gB-GNPop (50 ng antibody total) were added to HMEC-1 at the time of
44 infection with FIX virus at an MOI of 0.1, or the cells were mock treated (UT). Cells were
45 fixed at 5 dpi and immunofluorescence assay using IE1 antibody and a secondary RFP
46 anti-mouse antibody were performed. Fluorescence was recorded in the RFP (A, D),
47 Hoechst (B, E), and GFP (C, F) channels. The GFP signal emanates from the virus
48 genome.



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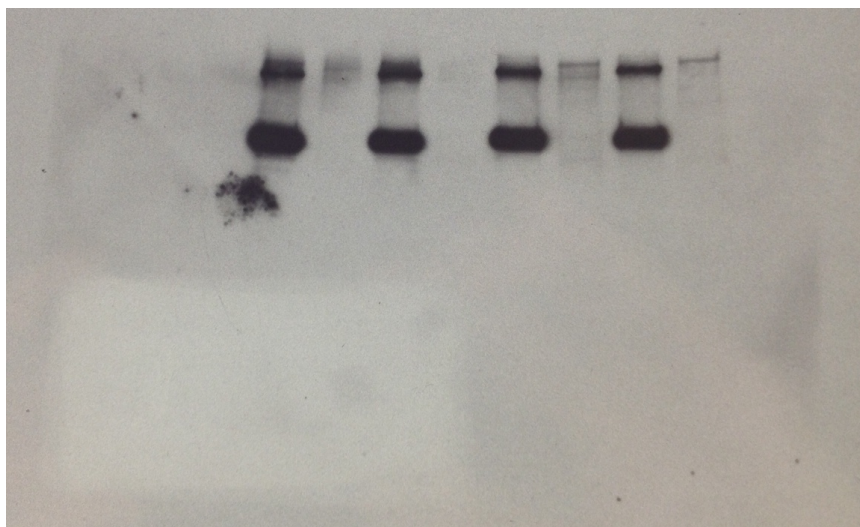
51 **Extended data 5.** Transmission electron microscopy images of freshly prepared
52 monoclonal antibody conjugated gold nanoparticles of different shapes. A) Monoclonal
53 antibody conjugated spherical gold nanoparticles (gB-GNPsp). B) Monoclonal antibody
54 conjugated popcorn-shaped gold nanoparticle (gB-GNPop). C) Monoclonal antibody
55 conjugated star-shaped gold nanoparticles (gB-GNPst).



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57 **Extended data 6.** Uncropped gels for the immunoblots shown in Fig. 5.

58 **A. IE1 blot:** Lane structure is same as in Fig. 5A.

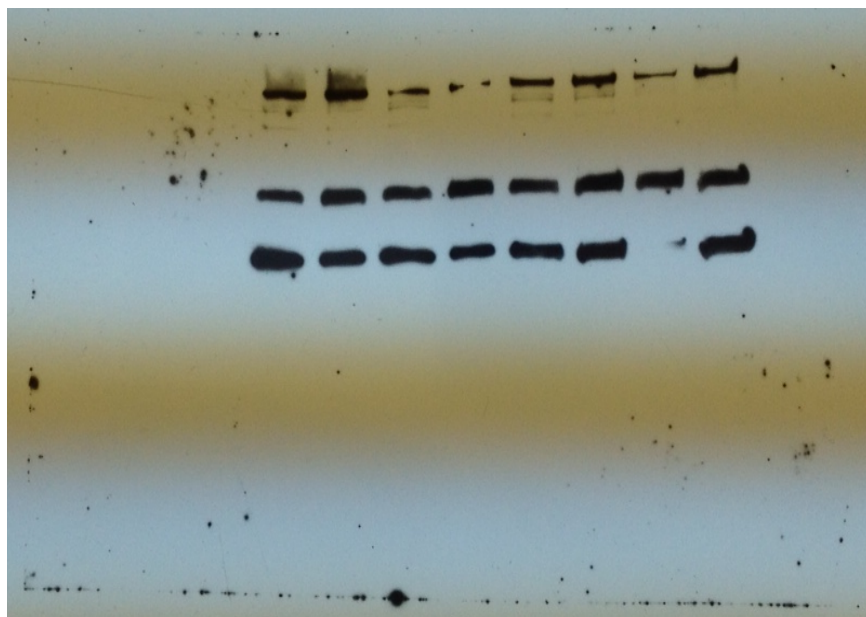


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61 **B. b-actin blot.** Lane structure is same as in Fig. 5A. The bands in the middle of the gel

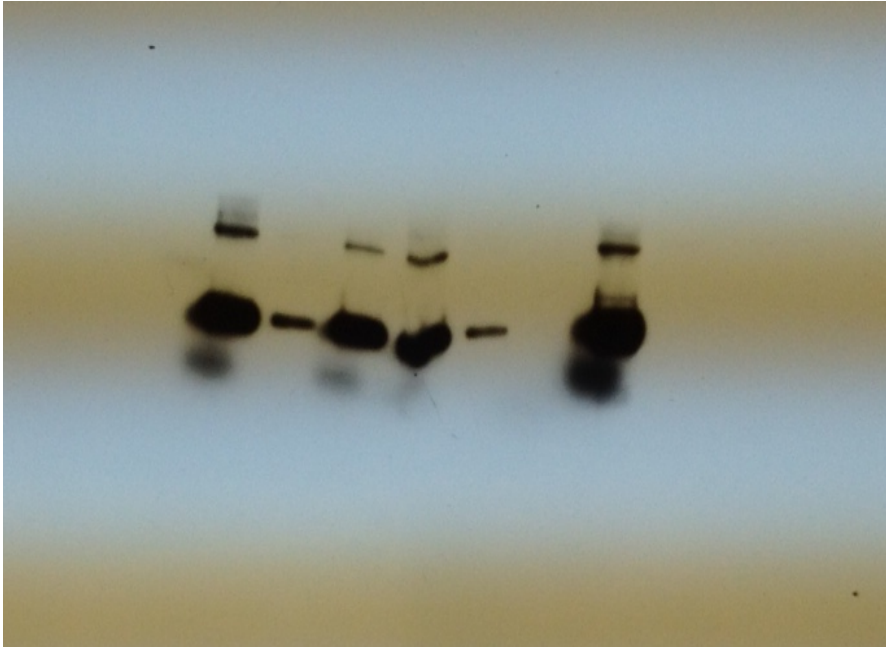
62 represent b-actin.



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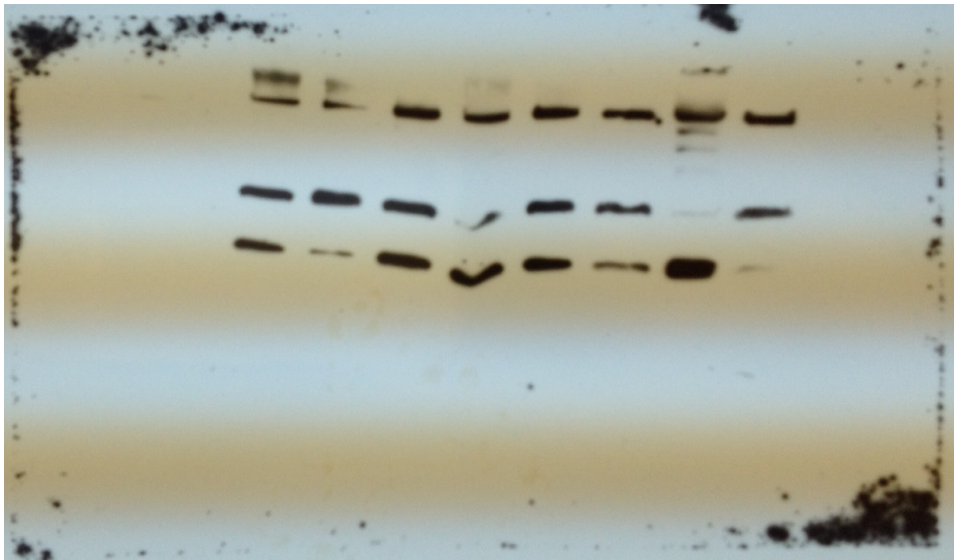
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65 C. IE1 blot. Lane structure is same as in Fig. 5B. Only first two lanes are represented in Fig.
66 5B.



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69 D. b-actin blot. Lane structure is same as in Fig. 5B. Only first two lanes are represented in
70 Fig. 5B. The bands in the middle of the gel represent b-actin



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