Supporting Information

Kim et al. 10.1073/pnas.1116034108

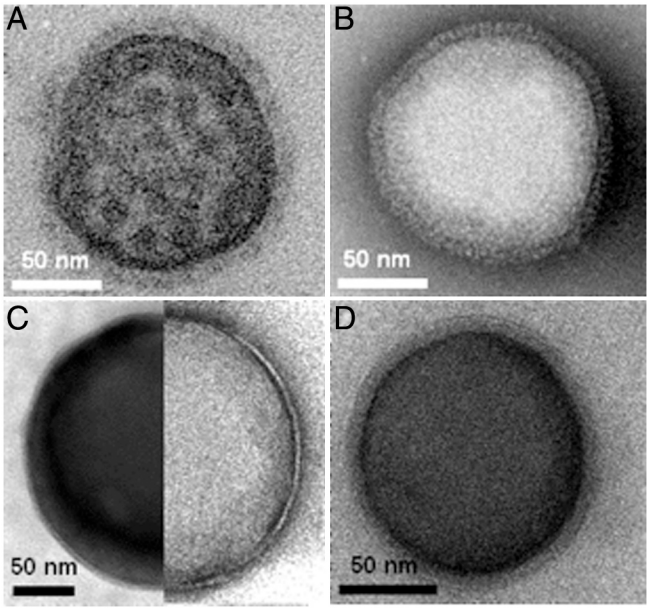

Fig. S1. Nanobead supported membrane and PIV5 virus in electron microscopy. (*A*) An EM image of virus in a sectioned sample, stained by 2% uranyl acetate for positive staining, shows all protein, nucleocapsid and membrane components with positive contrast. (*B*) Negative stain of a virus in a sample treated with 2% OsO_4 to increasing contrast of the enveloped protein. (*C*) Negative and positive stains of a polystyrene nanobead (200 nm in mean diameter) with 2% uranyl acetate indicate that the depth of the lipid membrane is 5 nm, in good agreement with the expected value for the bilayer composition of DOPC:POPC:cholesterol:GD_{1a} (4:4:2:0.1) treated with bovine brain disialoganglioside (GD_{1a}) to provide sialic acid as the viral receptor. (*D*) Silica nanobead (120 nm in mean diameter) stained with 2% OsO_4 and 2% UA.

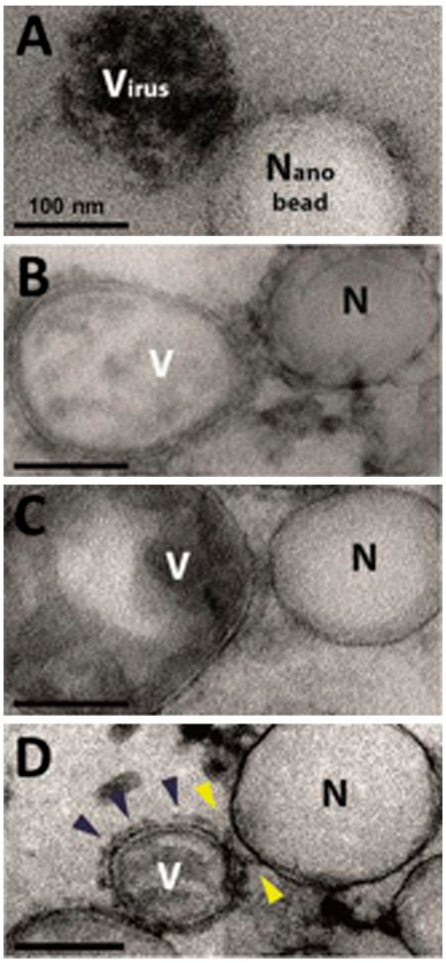

Fig. S2. Optimizing condition for sectioning and staining in electron microscopy. (*A*) Changing the staining conditions increases the contrast, allowing the proteins and the membranes to more clearly be seen. From top (*A*) to bottom (*D*), (*A*) 4% uranyl acetate; (*B*) 1% tannic acid, 2% osmium tetroxide; (*C*) 1% tannic acid, 2% osmium tetroxide, posttreatment with 2% uranyl acetate for 5 minutes; (*D*) 1% tannic acid, 2% osmium tetroxide, posttreatment with 2% uranyl acetate for 20 min. Black arrows show surface proteins potentially in prefusion states, while yellow arrows show surface proteins potentially forming prehairpin intermediates.

Other Supporting Information Files

Dataset S1 (TXT)