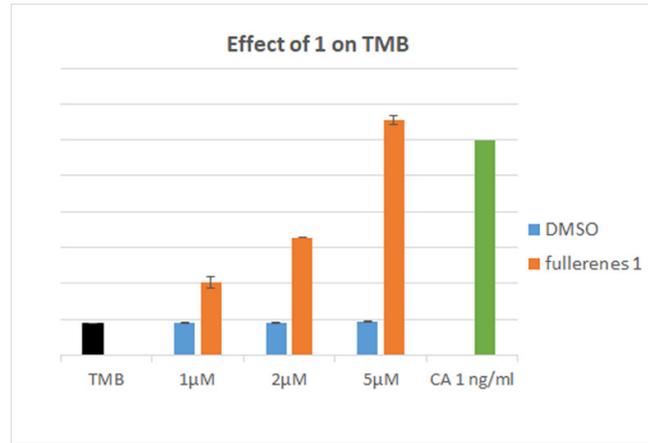


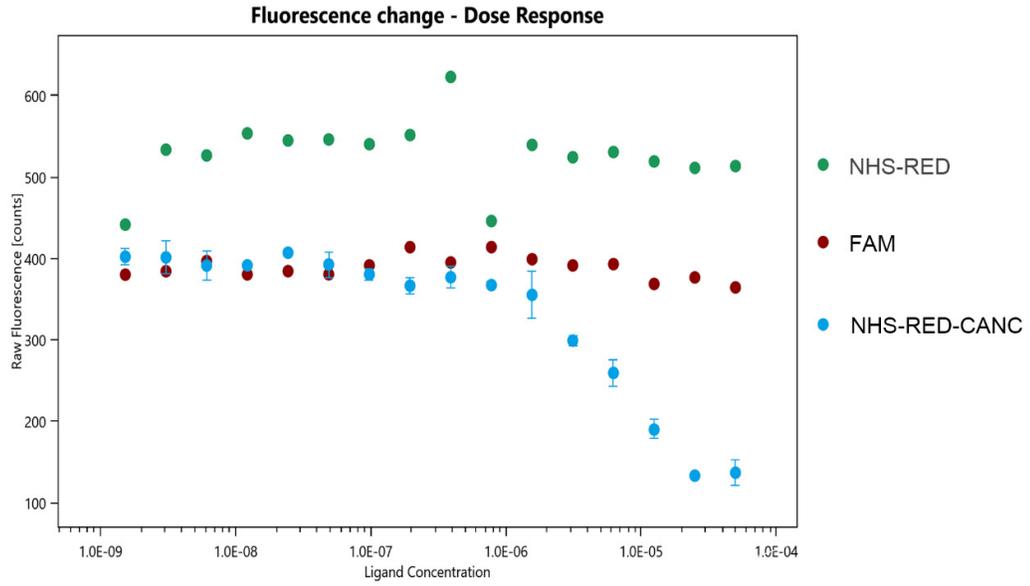
Fullerenes derivative prevents packaging of viral genomic RNA into HIV-1 particles due to binding nucleocapsid protein. Krížová I, et al.

Supplementary Figure S1. Interference of fullerenes **1** with ELISA, MST and FAITH. **(a)** Effect of **1** on ELISA signal: Fullerenes **1** at 1, 2 and 5 μM or control sample containing only DMSO at final concentration 1% were incubated with anti-rabbit HRP-conjugated secondary antibody (Sigma-Aldrich) diluted 1:10,000 in reaction buffer were mixed with 100 μl of the TMB substrate (1 mg of 3,3',5,5'-tetramethylbenzidine, Sigma-Aldrich diluted in 1 ml DMSO, 0.006% hydrogen peroxide, 0.05 M phosphate-citrate buffer, pH 5.0). The reaction was stopped by the addition of 50 μl of 2M sulfuric acid and the absorbance of the samples was measured at 450 nm using a Tecan M200 Pro. The HIV-1 CA amount was calculated using linear regression equation in the linear part of the calibration curve. **(b)** The effect of fullerenes **1** on MST signals of fluorescent dyes NHS-RED and FAM, and NHS-RED labeled HIV-1 CANC at increasing concentrations of **1** from 15 nM to 50 μM . The samples were loaded into Monolith NT.115 Capillaries (NanoTemper Technologies) and data of three independent measurements were analyzed using Affinity Analysis software version 2.3, (NanoTemper Technologies). **(c)** Dual-labelled tqON was pre-incubated with DMSO (of the final concentration 1%) or fullerenes **1** of the final concentration of 1, 2 and 5 μM for 1 h in 1% DMSO. Exonuclease I (ExoI) was added, and the fluorescence of the fluorophore released from degraded tqON was measured using a Tecan M200Pro plate reader.

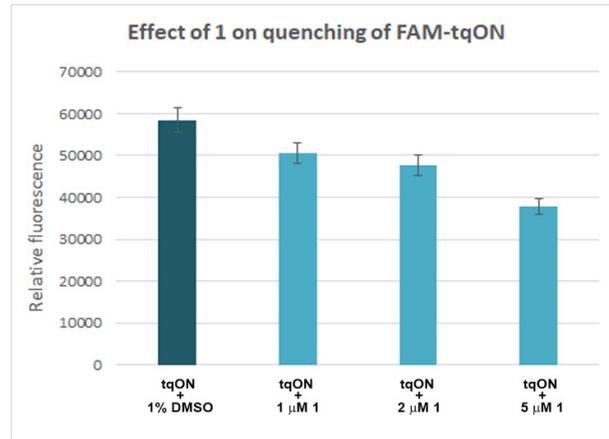
a)



b)



c)



Supplementary Figure S2. Docking of fullerenes **1** into HIV-1 CA structure. Docking into CA structure (3NTE) was carried out in two programs, PLANTS and AutoDock Vina. PLANTS selected binding sites **1** (80%) and **3** (20%) whereas Autodock-Vina docked fullerenes **1** into **2** (80%) and **3** (20%).

