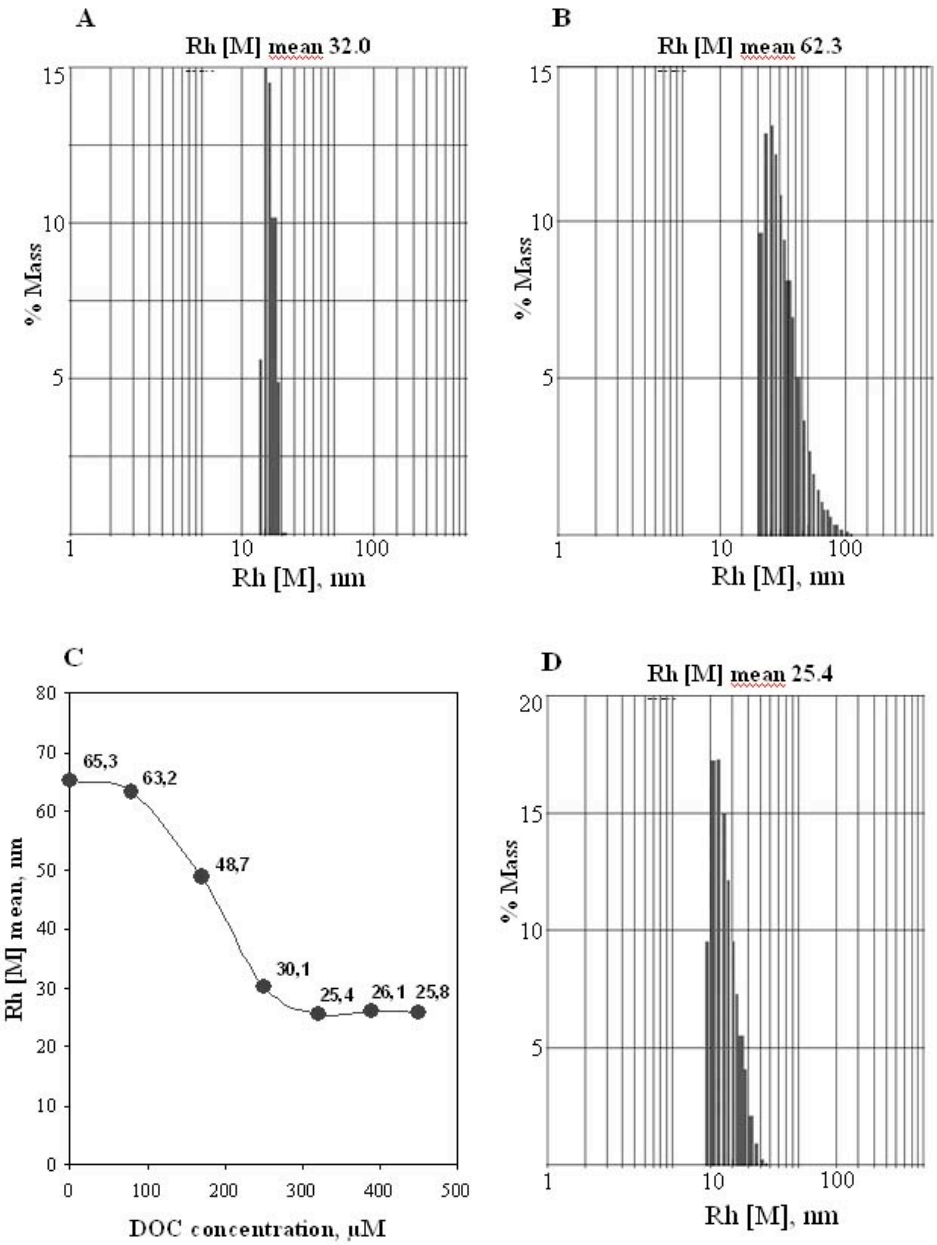
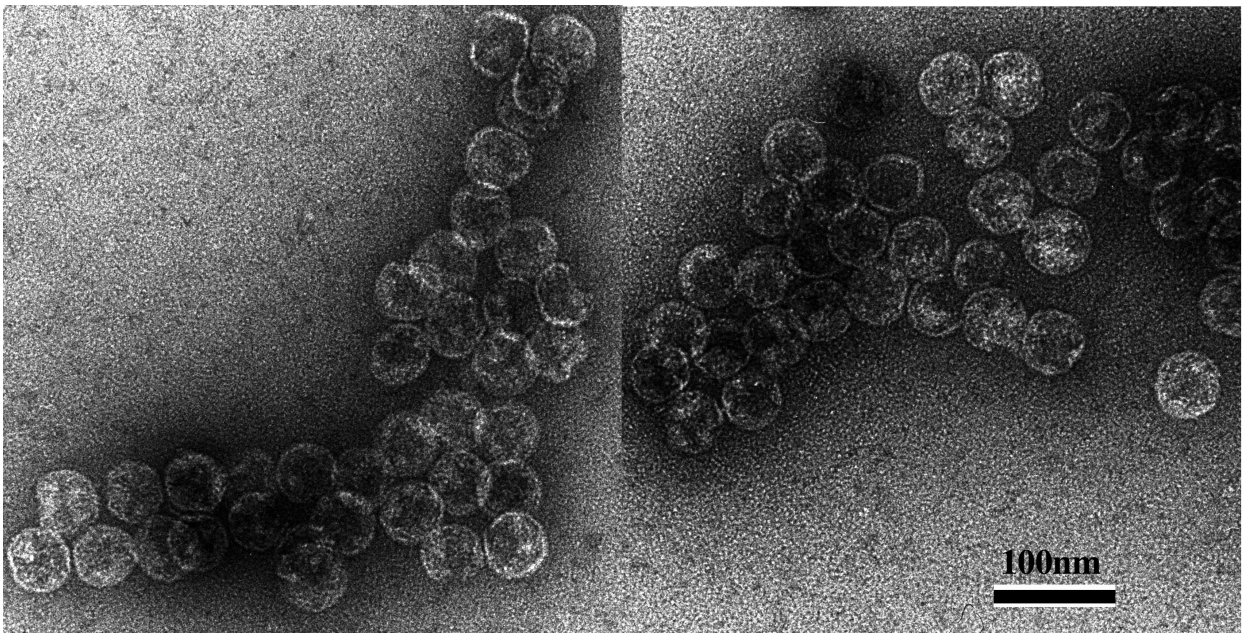
Supplementary Figures



Supplementary Figure S1

Dynamic light scattering of rotavirus DLPs and purified cores: Titration of desaggregation of cores by DOC

A. Mass distribution of DLPs (Rh(M)mean 32.0 nm; PI 8 %); B. Mass distribution of purified rotavirus cores (Aggregates: Rh(M) 62.3 nm; PI 34 %); C. Titration of the desaggregation of rotavirus cores in the presence of 80 – 450 uM DOC; D. Mass distribution of rotavirus cores in the presence of 320 uM DOC (Rh(M) 25.4 nm; PI 20 %).

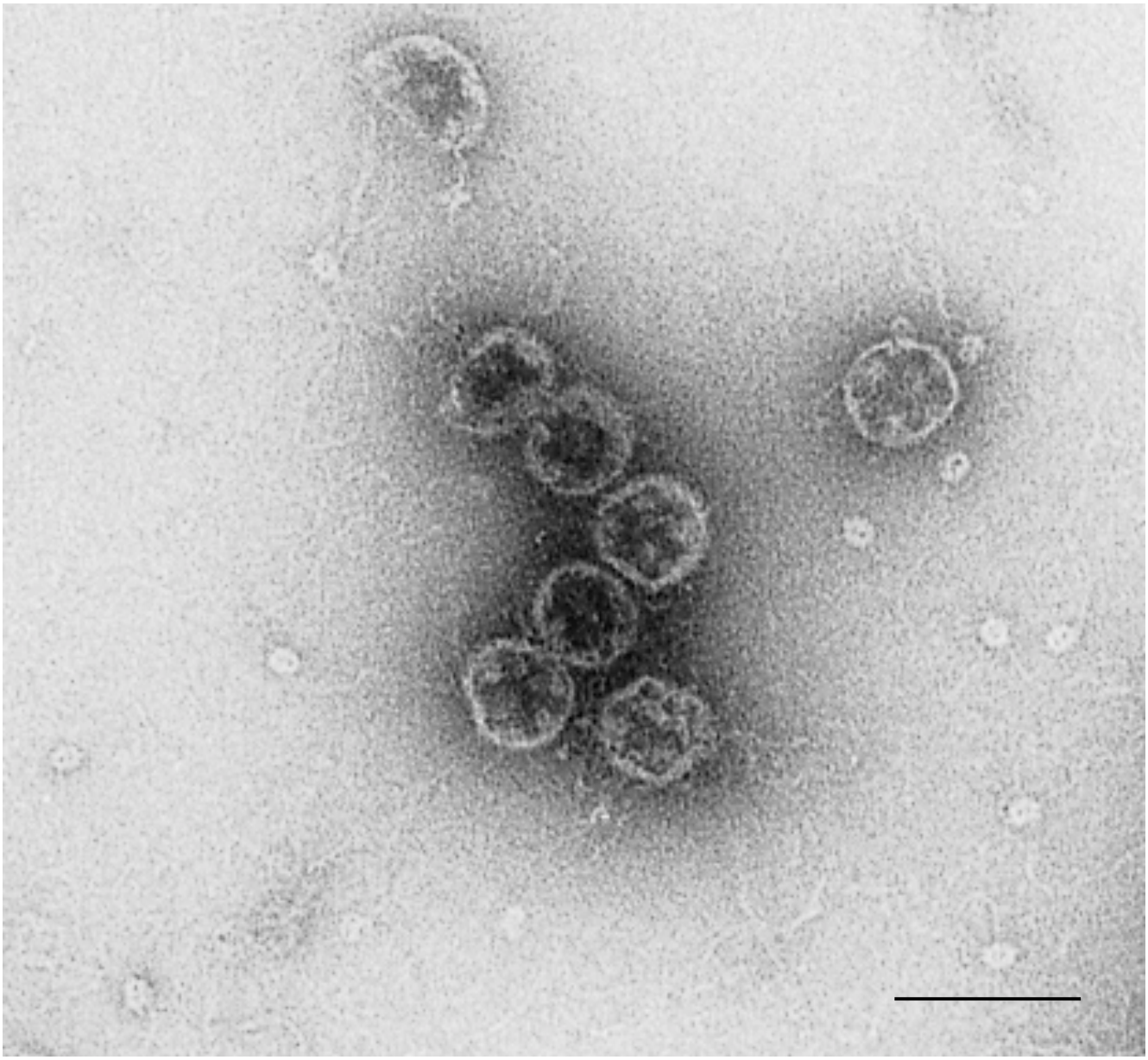


A **B**

Supplementary Figure S2

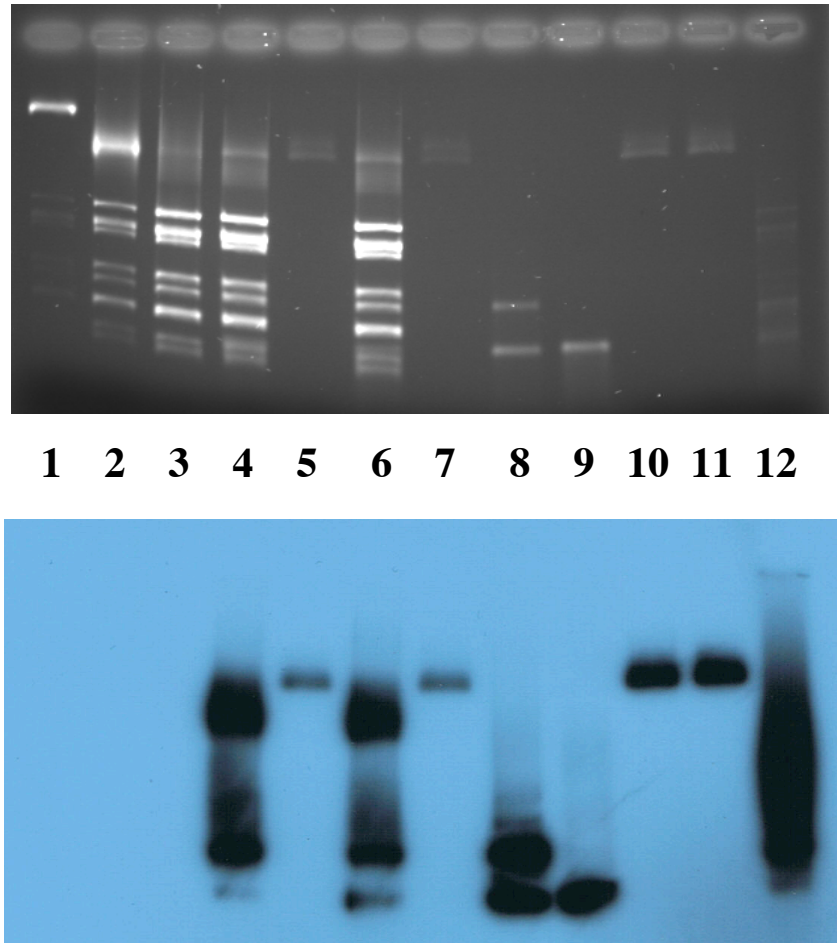
Electron microscopy of core-like particles

A. Untreated; B. Treated by 10 mM EGTA. The particles form aggregates. The calibration bar indicates 100 nm.



Supplementary Figure S3

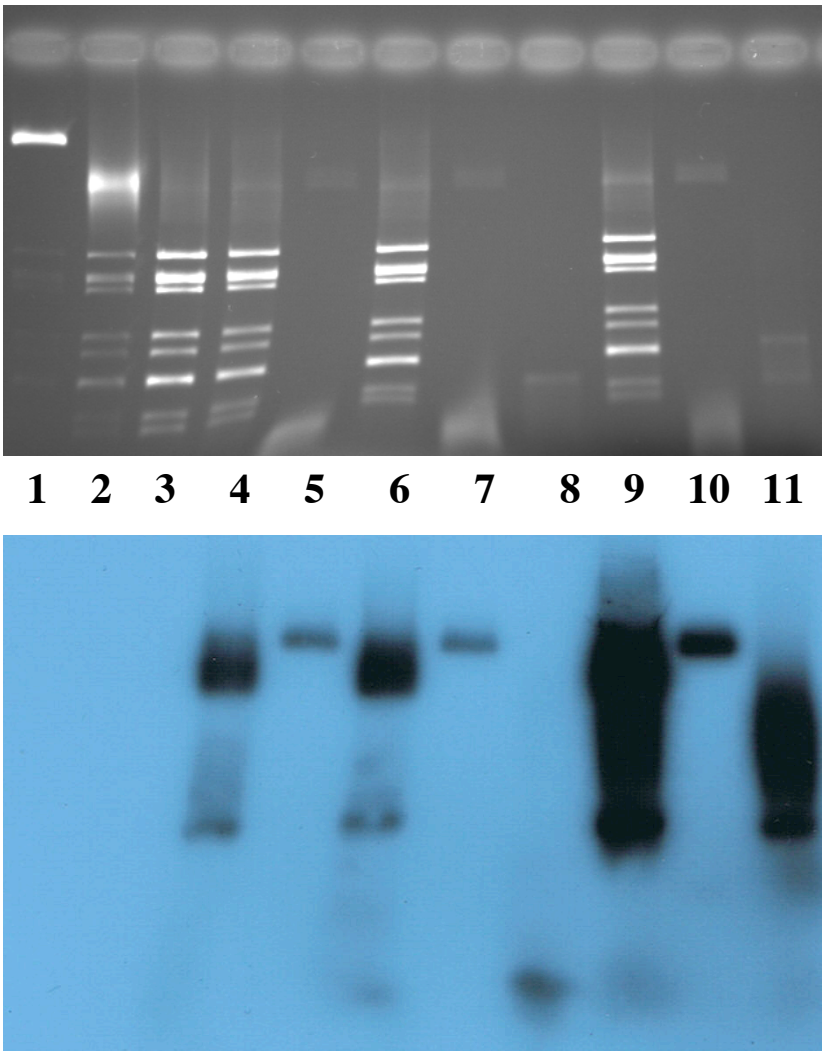
Enlarged panel B of Figure 4. Calibration bar: 100 nm



Supplementary Figure S4

Non-specificity of packaging of RNA into rotavirus cores in vitro: Preheating of viral RNAs

0.8 % agarose gel, MOPS-Tris buffer 10 mM, pH 7.7. A. Gel unfixed, stained with ethidium bromide; B. Gel fixed, dried and autoradiographed. Lane 1: DLPs; lane 2: native RV cores; lane 3: cores + EGTA; lane 4: cores + EGTA + ^{32}P-labelled RV RNA7 + packaging mixture; lane 5: as in lane 4 + RNase I; lanes 6, 7: as lanes 4, 5, with RNA7 heated at 80ºC for 1 min; lane 8: RNA7; lane 9: RNA7, heated at 80ºC for 1 min; lane 10: as in lane 4, using ^{32}P-labelled HIV-2 RNA1104; lane 11: as in lane 10, HIV-2 RNA1104 heated at 80ºC for 1 min; lane 12: HIV-2 RNA1104.

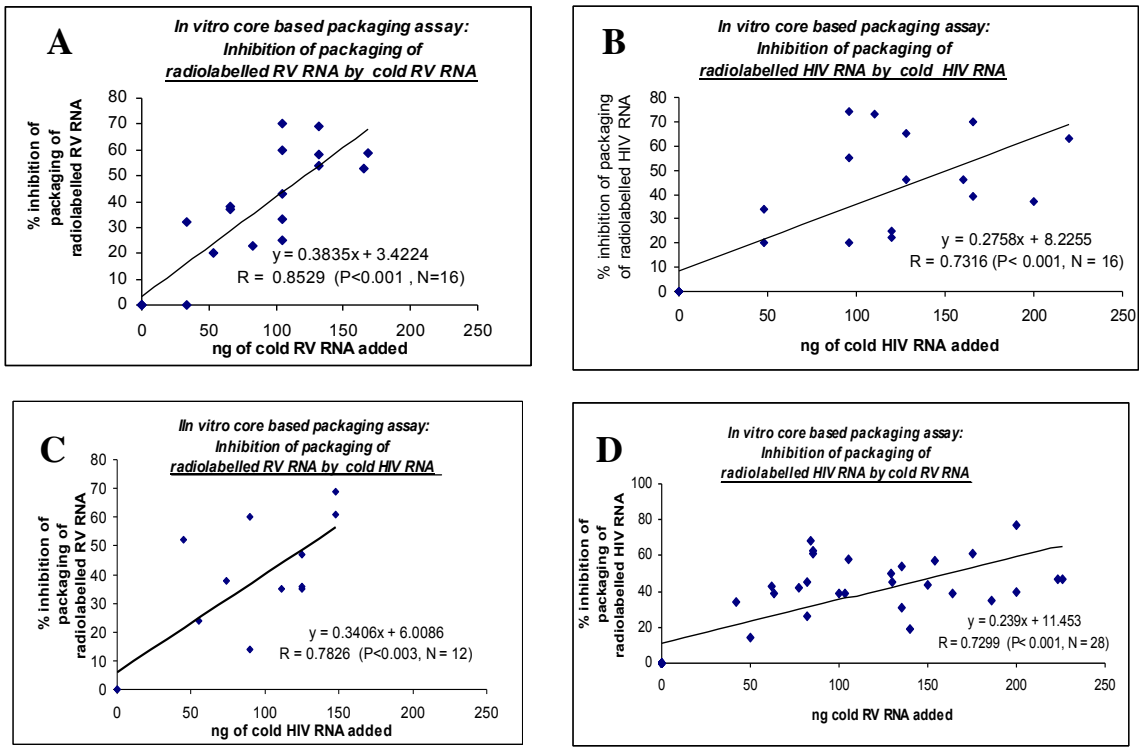


Supplementary Figure S5

Non-specificity of packaging of RNA into rotavirus cores in vitro: Influence of electrolyte concentration in packaging mixture

0.8 % agarose gel, MOPS-Tris buffer 10 mM, pH 7.7. A. Gel unfixed, stained with ethidium bromide; B. Gel fixed, dried and autoradiographed. Lane 1: DLPs; lane 2: native RV cores; lane 3: cores + EGTA; lane 4: cores + EGTA + preheated ^{32}P-labelled RV RNA7 + packaging mixture; lane 5: as in lane 4 + RNase I; lanes 6, 7: as lanes 4, 5, low concentration of electrolytes in packaging mixture (8 mM NaCl omitted) ; lane 8: RNA7; lanes 9, 10: as in lanes 4, 5, using HIV-2 RNA1104; lane 11: HIV-2 RNA1104 heated at 80ºC for 1 min.

Homologous and heterologous RV and HIV-2 competitive core packaging assays



Supplementary Figure 6

Competitive packaging of RV and HIV RNAs into opened and restabilised RV cores

Rotavirus RNAs and HIV-2 RNA fragments were transcribed in vitro from cDNAs or RT-PCR amplicons and radiolabelled using T7 RNA polymerase and α-^{32}P-UTP. The products were purified by RNAeasy mini-elute columns and quantitated by spectrophotometry (Nanodrop system). Mixtures of radiolabelled and cold RNAs (homologous and heterologous) at various ratios were tested for packaging using opened and restabilised rotavirus cores. Subsequently, reaction mixtures were treated with RNase One (only packaged ssRNA will be protected) and electrophoretically separated on non-denaturing MOPS-Tris (20 mM, pH 7.7) agarose gels which were dried and subjected to autoradiography. Radiolabelled RNA packaged into cores was densitometrically quantitated using the Image-J program (http://rsbweb.nih.gov/ij/).

A. Competition of radiolabelled RV RNA with cold RV RNA
B. " " " HIV " " " HIV "
C. " " " RV " " " HIV "
D. " " " HIV " " " RV "