

**Biophysical correlates on the composition, functionality and structure of dendrimer-liposome aggregates**

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Supplementary Section

Table S1. Binding constant ( $K$ ) for the formation of dendrimer-liposome complex.

Dendrimer generation→	$10^{-4} \times K / \text{mol}^{-1}$		
	3G	4G	5G
Liposomes↓			
DHP+DPPC	8.81	6.71	5.21
DMPG+DPPC	10.74	9.72	7.21
DPP+DPPC	10.06	7.82	6.32
DPPEth+DPPC	9.98	7.81	6.11

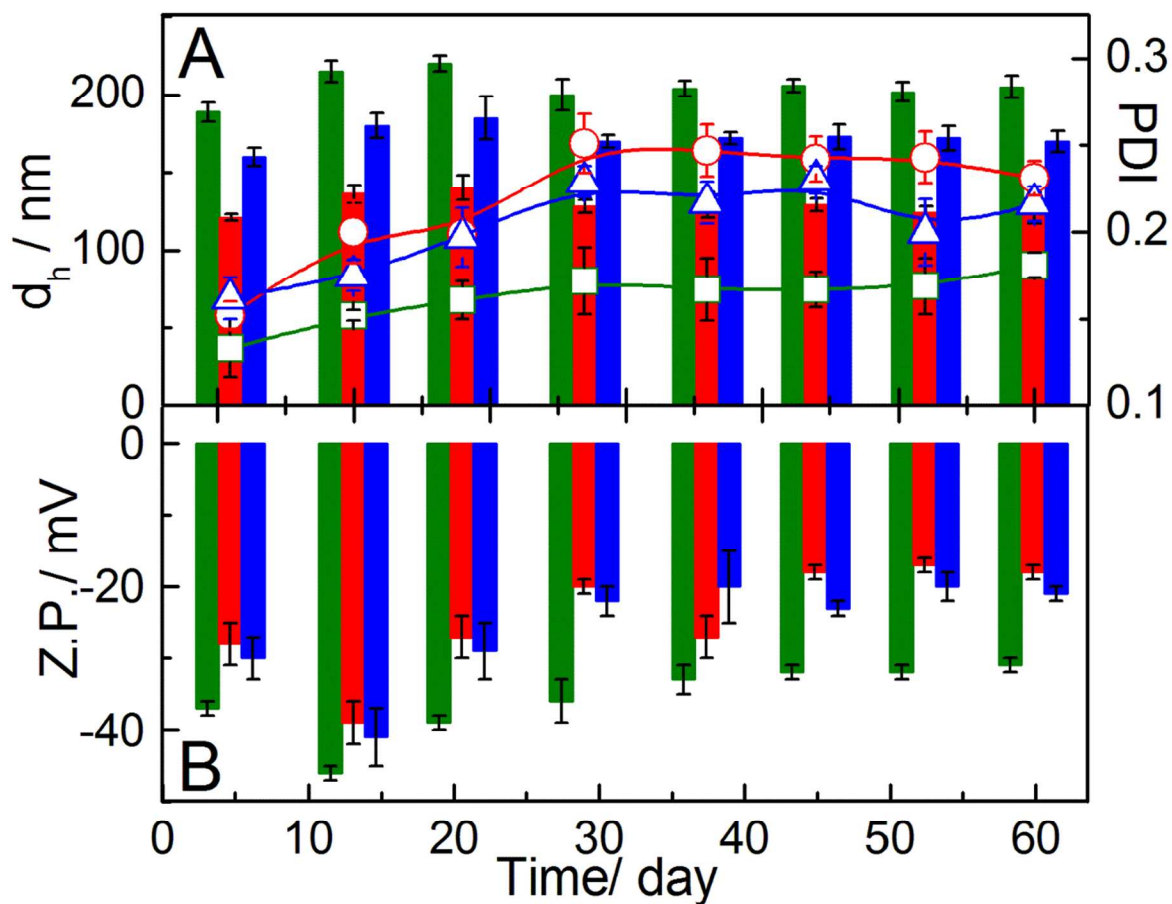


Figure S1. Variation in the hydrodynamic diameter ( $d_h$ ), polydispersity index (PDI, line graphs) and zeta potential (ZP) of different liposomes with time. 30 mol % cholesterol was used in each case. DPPC : anionic lipid ratio is 7:3 (M/M). Bar/lines: green, DHP+DPPC; red, DMPG+DPPC and blue, DPP+DPPC. Temperature: 25 °C. Phospholipid concentration: 0.1 mM..

Supplementary Section

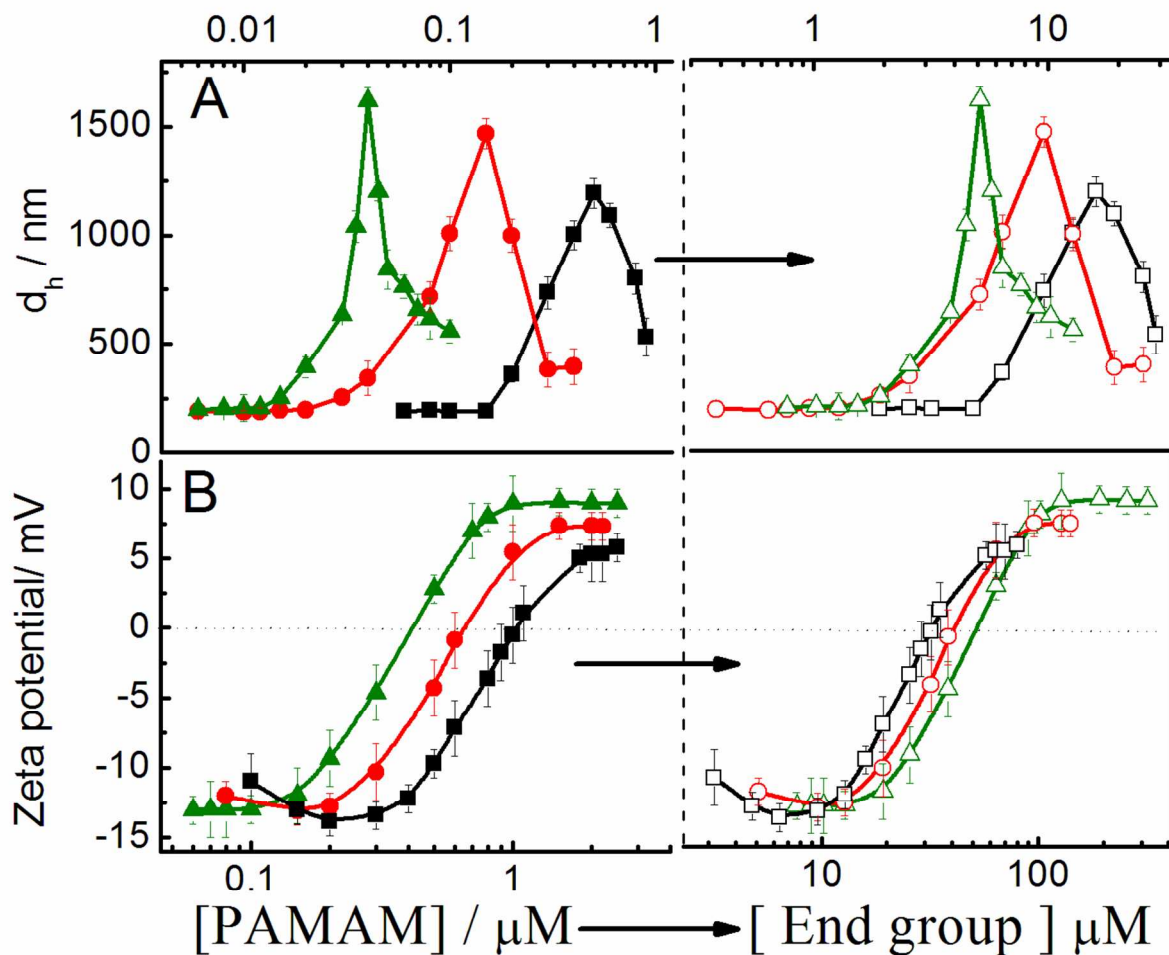


Figure S2. Effect of dendrimer generation and concentration : (G3,  $\blacksquare$ ; G4,  $\bullet$  and G5,  $\blacktriangle$ ) on the size (A) and zeta potential (B) of the (DPPC+DHP) liposome solutions (Left). Right side indicates the effect of end group concentration instead of concentration of dendrimer ( $\square$ , 3G;  $\circ$ , 4G and  $\triangle$ , 5G). 30 mol % cholesterol was used in each case. Phospholipid concentration : 0.1 mM.

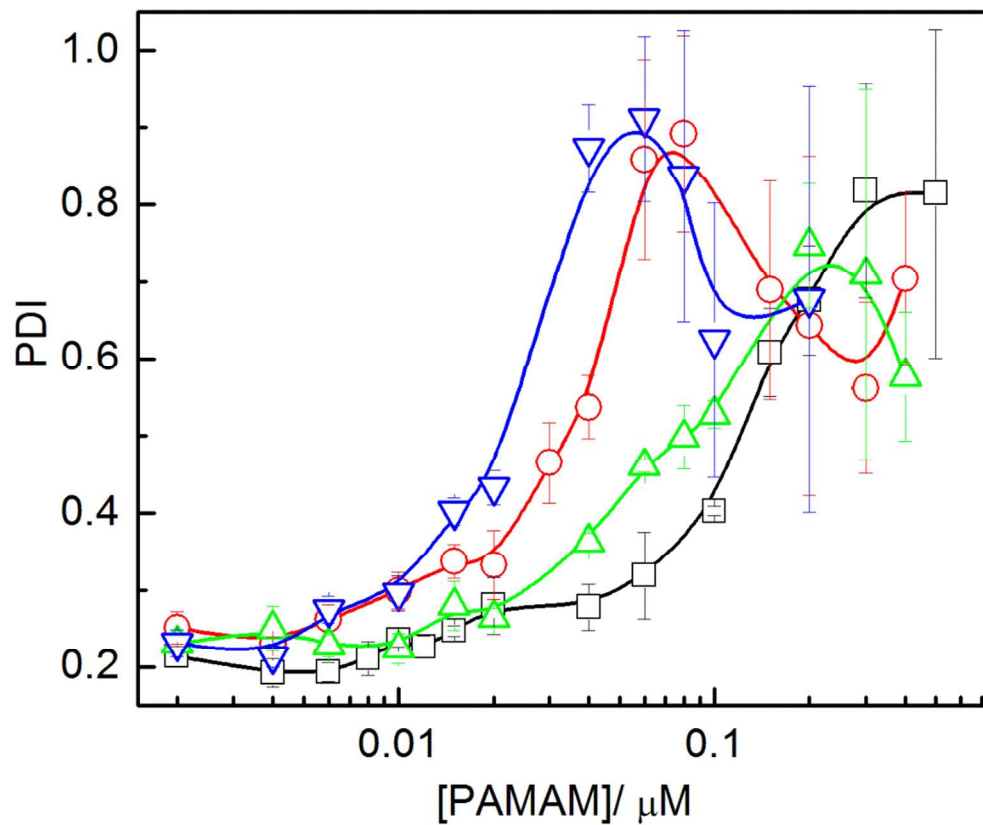


Figure S3. Polydispersity index (PDI) of different liposomes with varying concentration of 4G PAMAM dendrimer. Liposomes:  $\square$ , DHP+DPPC;  $\circ$ , DMPG+DPPC;  $\Delta$ , DPP+DPPC and  $\nabla$ , DPPEth+DPPC. 30 mol % cholesterol was used in each case. Phospholipid concentration: 0.1 mM.

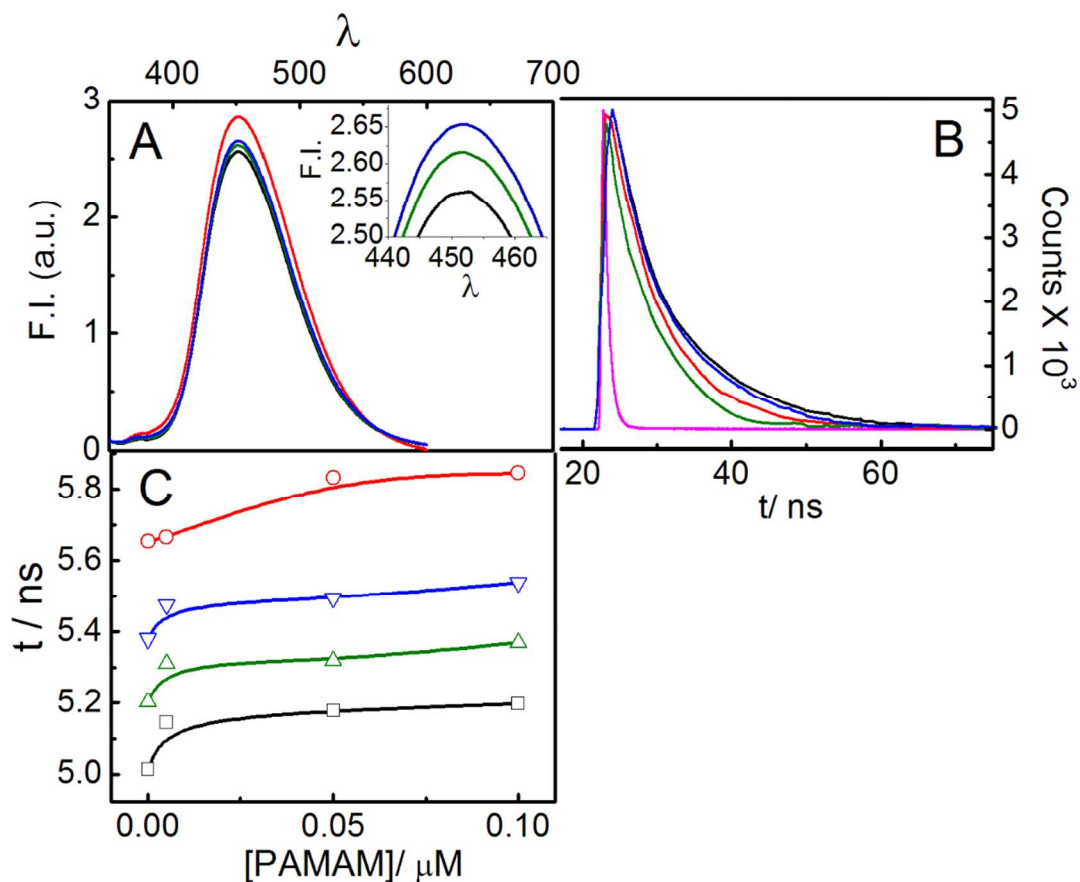


Figure S4. Steady state fluorescence spectra and life time study using 7-HC as a probe: panel A, steady state spectra of different liposomes ( black, DHP+DPPC; red, DMPG+DPPC; green, DPP+DPPC and blue, DPPEth+DPPC); panel B, fluorescence intensity decay for different liposomes (black, DHP+DPPC; red, DMPG+DPPC; green, DPP+DPPC, blue, DPPEth+DPPC and pink, IRF, instrument response function) and panel C, fluorescence life time for different liposomes ( $\square$ , DHP+DPPC;  $\circ$ , DMPG+DPPC;  $\triangle$ , DPP+DPPC and Panel D, DPPEth+DPPC) with varying concentration of dendrimer. 30 mol % cholesterol was used in each case. Phospholipid concentration: 0.1 mM.

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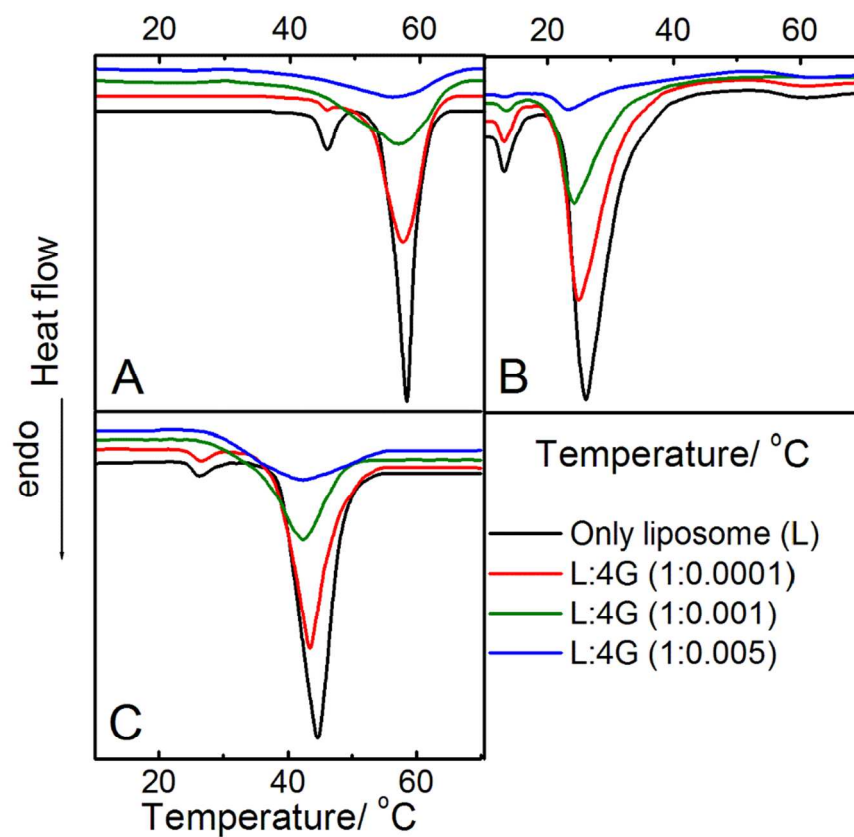


Figure S5. DSC thermogram of liposomes (panel A, DHP+DPPC; panel B, DMPG+DPPC and panel C, DPP+DPPC liposome) in presence and absence of PAMAM dendrimer of generation 4. 30 mol % cholesterol was used in each case.

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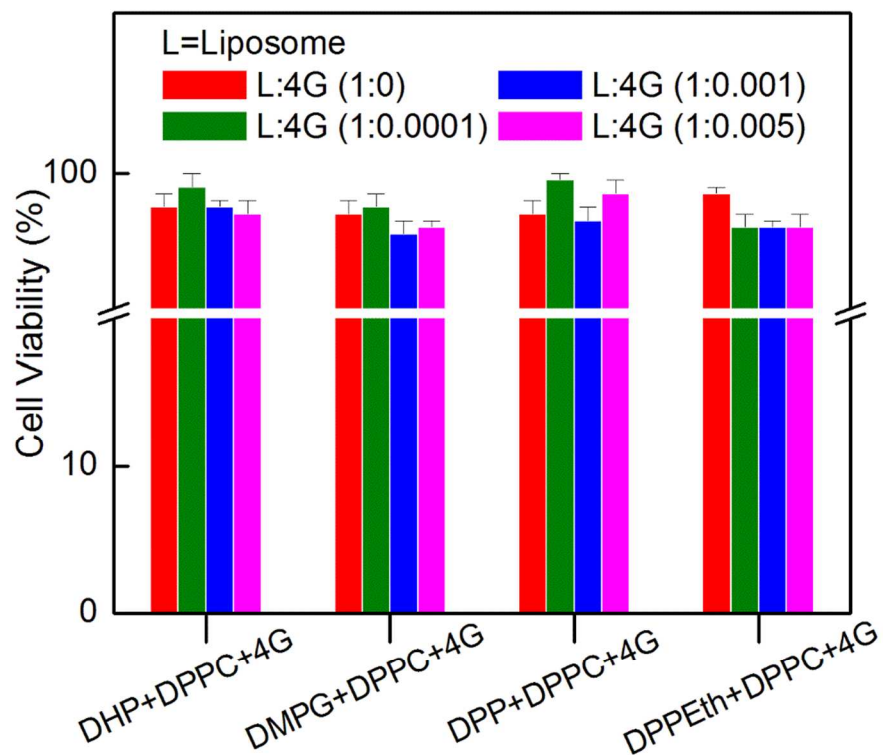


Figure S6. Dose response on various liposomes and dendrimer-liposome complexes with variation of 4G PAMAM dendrimer concentration on human blood cell lymphocyte. 30 mol % cholesterol was used in each case. Phospholipid concentration: 0.1 mM.



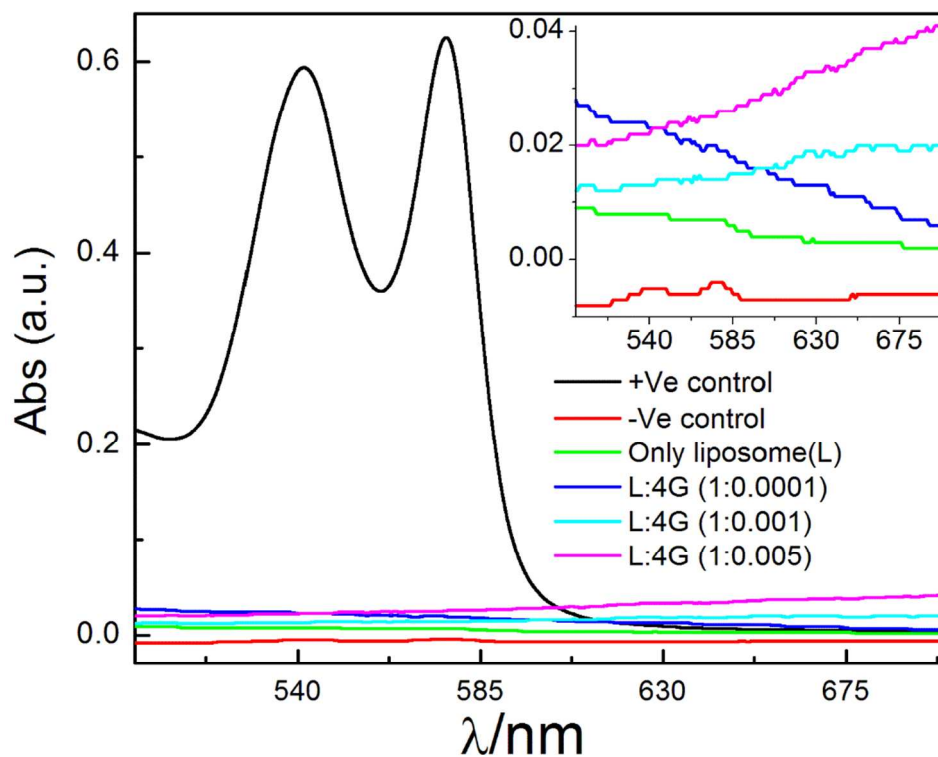


Figure S7. Haemolysis study of DPPeEth+DPPC liposome and dendrimer-liposome aggregates. 30 mol % cholesterol was used in each case. Phospholipid concentration: 0.1 mM.