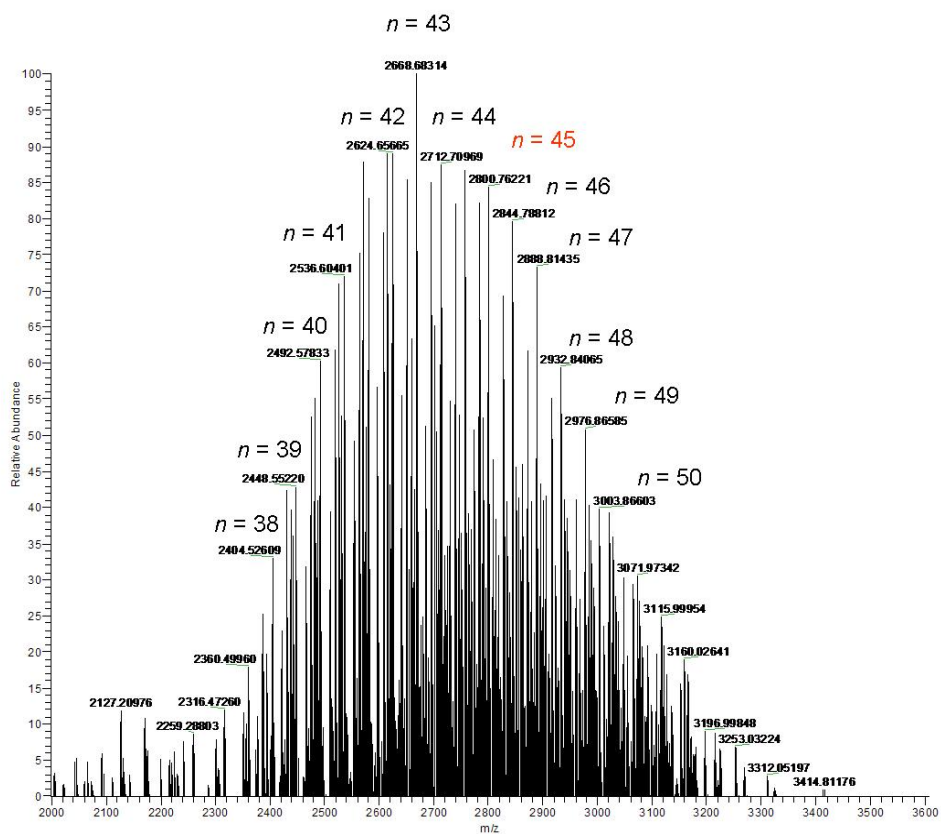


Supporting Information

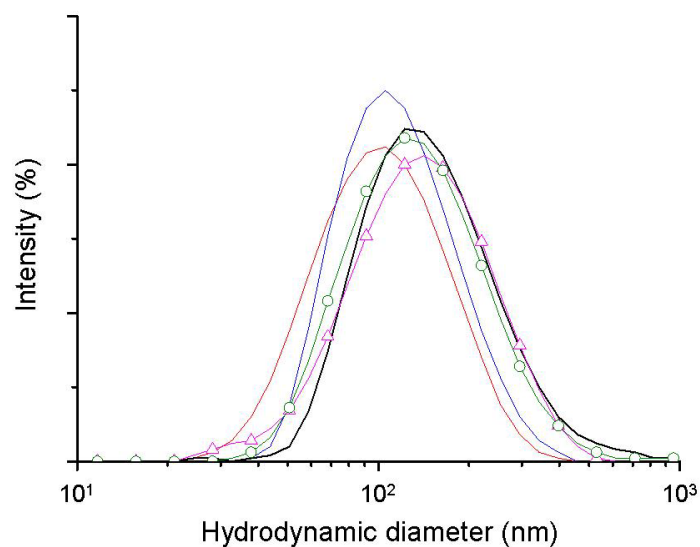
## **Influence of pegylation on peptide-mediated liposome fusion**

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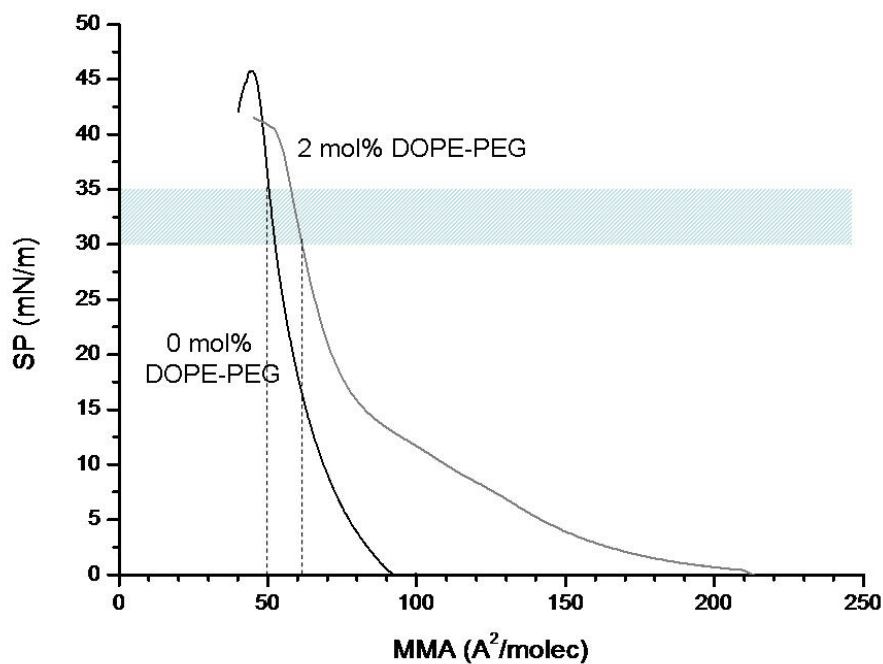
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**Figure S1.** High resolution mass spectra of DOPE-PEG. *n* indicates the number of ethylene glycol repeating units.



**Figure S2.** Size distributions of LPE-liposome (red) and LPK-liposome (blue) modified with DOPE-PEG measured at [lipid] = 0.1 mM, [LPE or LPK] = 1  $\mu$ M (1 mol% to the lipids), and 1 mol% of DOPE-PEG. The black lines are 1:1 mixtures of the two batches measured after 1 hour, which did not show further increase in time; after one day (with triangles) and after 4 days (with circles).



**Figure S3.** Monolayer compression isotherms of the lipid mixture (DOPC/DOPE/CH = 50:25:25 (mol%)) in the absence and presence DOPE-PEG. Assuming that lipid packing in bilayer systems is comparable to the monolayer with pressures of 30 – 35 mN/m,<sup>1,2</sup> the mean area per molecule in the lipid membrane of our system can be estimated to be 50 – 60 Å<sup>2</sup>/molecule.

1. Marsh, D., *Biochim. Biophys. Acta, Biomembr.* **1996**, 1286, 183-223.
2. Blume, A., *Biochim. Biophys. Acta* **1979**, 557, 32-44.