



**Supporting Figure 2:** Fluorescence recovery after photobleaching measurements on supported membrane bilayers. Confocal timeseries of a fluorescence recovery experiment (A), fluorescein-dipalmitoylphosphatidylethanolamine incorporated into a bilayer made from DOPC with 0.1 mole % GM1 is photobleached in a circular area of 45 mm diameter and the recovery of fluorescence within the photobleached area is imaged. Scalebar is 20mm. (B) Averaged fluorescence intensity plot of three photobleaching experiments on one membrane. Total fluorescence recovery is  $86.8 \pm 3.5$  %.