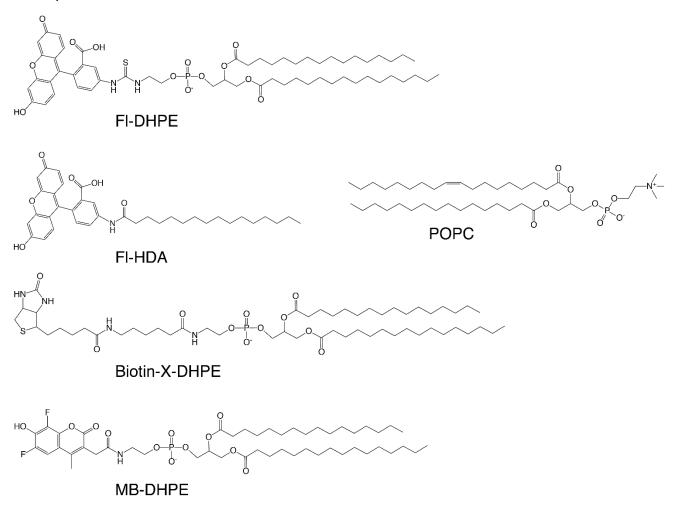
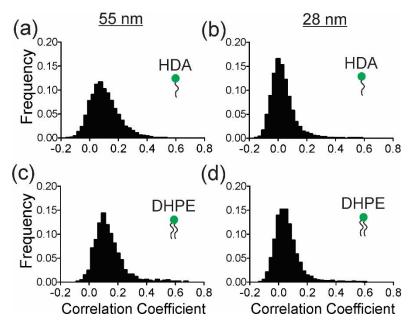
## **Supplemental Figures**

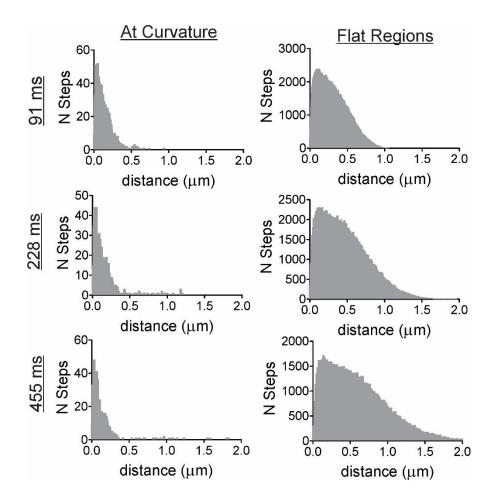
Single Lipid Molecule Dynamics on Supported Lipid Bilayers with Membrane Curvature by Cheney *et.al.* 



**Figure S1:** Chemical structures of the lipids used in this study. Fluorescein labeled DHPE (Fl-DHPE, Thermo Fisher Cat. Num. F362), Fluorescein labeled Hexadecanoic Acid (Fl-HDA, Thermo Fisher Cat. Num. H110), Biotin labeled DHPE (Biotin-X-DHPE, Thermo Fisher Cat. Num. B1616), Marina Blue<sup>®</sup> labeled DHPE (MB-DHPE, Thermo Fisher Cat. Num. M12652) and POPC (Avanti Polar Lipids Cat. Num. 850457).



**Figure S2:** Distributions of the Pearson's correlation coefficient for HDA and DHPE at regions of membrane curvature. A) FI-HDA at regions of curvature that have a ROC pf 55 nm. B) FI-HDA at regions of curvature that have a ROC pf 28 nm. C) FI-DHPE at regions of curvature that have a ROC pf 55 nm. D) FI-DHPE at regions of curvature that have a ROC pf 55 nm. D) FI-DHPE at regions of curvature that have a ROC pf 28 nm.



**Figure S3:** Distributions of the displacements made by single Strep-DHPE molecules. Tracks were separated into steps that start at curved regions (left) and flat regions (right) for 91, 228 and 455 ms time delays.