

## Supporting Information

### Statin Action Targets Lipid Rafts of Cell Membranes: GIXD / PM-IRRAS Investigation of Langmuir Monolayers.

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Table S1 Characteristic parameters of Langmuir monolayers formed on PBS buffer and PBS subphase containing  $10^{-5}$  M of statins.

	Subphase	$A_0$ (Å <sup>2</sup> )	$A_{\pi=30 \text{ mN/m}}$ (Å <sup>2</sup> )	$C_s^{-1}\text{max}$ (mN/m)
<i>Chol</i>	PBS pH=7.4	41.6±0.4	37.5±0.2	399±10
	$10^{-5}$ M FLU	43.8±0.7	39.4±0.3	310±8
	$10^{-5}$ M CER	72.7±1.8	48.0±2.0	67±12
<i>SM</i>	PBS pH=7.4	50.7±1.0	44.3±1.0	185±6
	$10^{-5}$ M FLU	64.8±0.7	55.6±1.1	131±0
	$10^{-5}$ M CER	59.7±2.0	45.1±0.2	87±4
<i>Chol:SM</i> <i>1:1</i>	PBS pH=7.4	42.5±0.5	38.0±0.3	360±11
	$10^{-5}$ M FLU	44.6±0.5	41.3±0.3	360±3
	$10^{-5}$ M CER	50.0±0.0	40.2±1.0	220±10

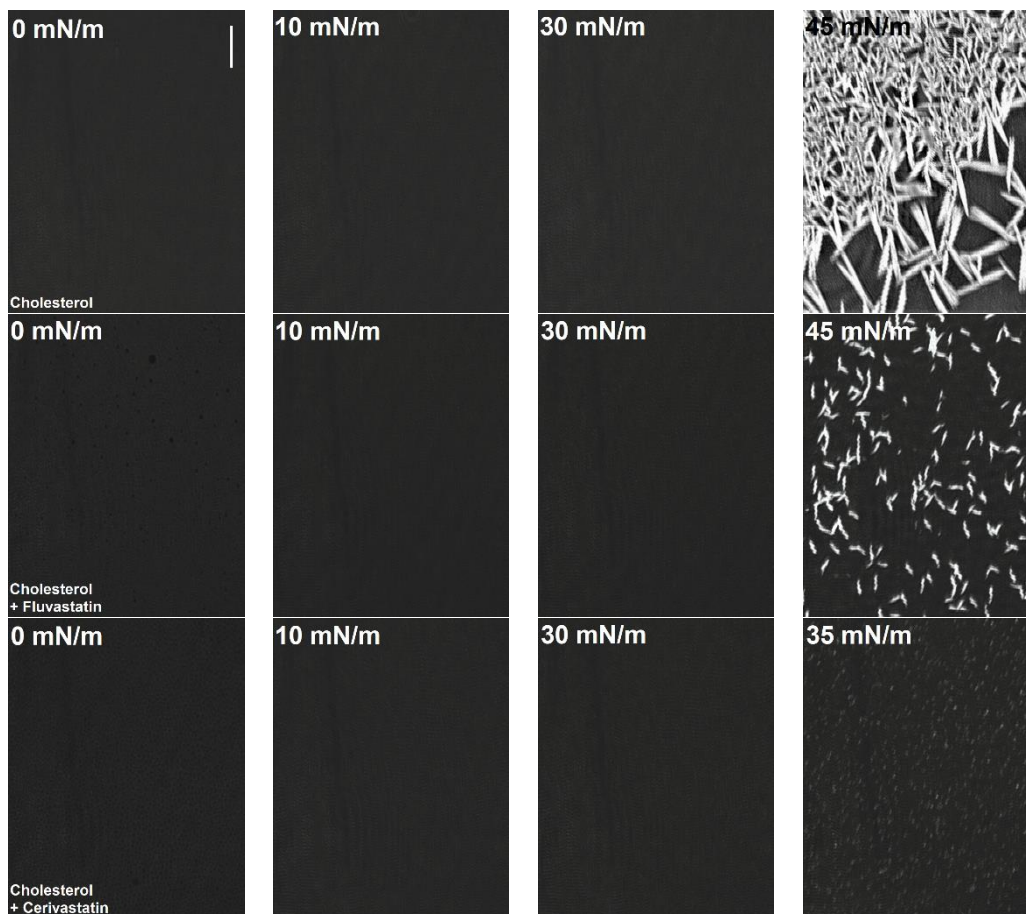


Figure S1. BAM pictures obtained at selected surface pressures for Chol monolayers formed on PBS buffer pH 7.4 and PBS pH 7.4 containing  $10^{-5}$  M statins. ( $T=21\pm 1^\circ\text{C}$ ). The scale bar is  $100\ \mu\text{m}$ .

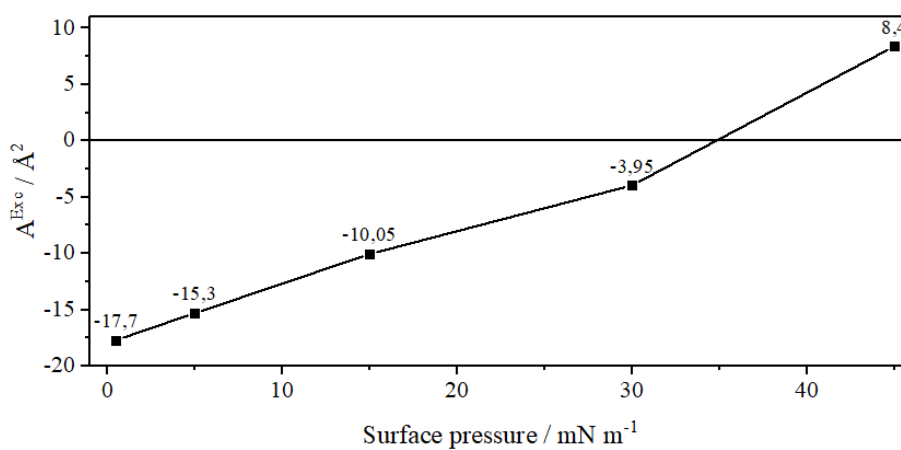


Figure S2. Values of the excess area ( $A^{Exc}$ ) calculated at selected surface pressures for Chol:SM 1:1 monolayers.

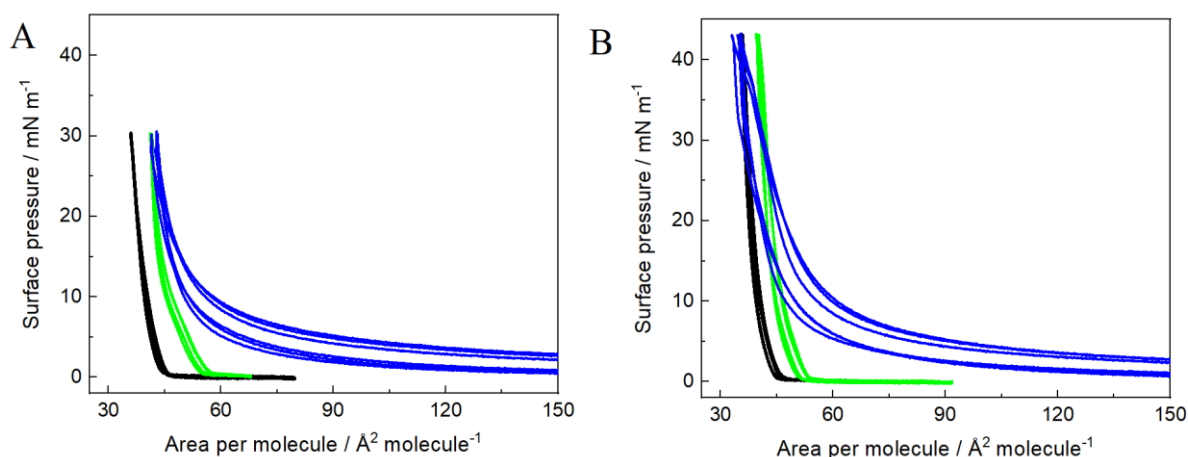


Figure S3 Compression-expansion cycles for Chol:SM 1:1 monolayers on pure PBS buffer (black) and buffer containing  $10^{-5}$  M FLU (green) and CER (blue) compressed to A) 30 mN/m and B) 43 mN/m.

Table S2 Thermodynamic functions of hysteresis: the free energy of compression ( $\Delta G_{comp}$ ), expansion ( $\Delta G_{exp}$ ) and hysteresis ( $\Delta G^{hys}$ ), the configurational entropy of hysteresis ( $T\Delta S^{hys}$ ), and the enthalpy of hysteresis ( $\Delta H^{hys}$ ) for Chol:SM 1:1 monolayers formed on pure PBS subphase and PBS subphase containing statins compressed to 43 mN/m.

Subphase	$\Delta G_{comp}/$ kcal·mol <sup>-1</sup>	$\Delta G_{exp}/$ kcal·mol <sup>-1</sup>	$\Delta G^{hys}/$ kcal·mol <sup>-1</sup>	$T\Delta S^{hys}/$ kcal·mol <sup>-1</sup>	$\Delta H^{hys}/$ kcal·mol <sup>-1</sup>
<i>43 mN/m</i>					
PBS pH=7.4	$0.17\pm 0.0$	$0.13\pm 0.0$	$-0.05\pm 0.0$	$-2.4\pm 0.2$	$-2.5\pm 0.5$
$10^{-5}$ M FLU	$0.26\pm 0.07$	$0.17\pm 0.0$	$-0.09\pm 0.01$	$-1.5\pm 0.2$	$-1.6\pm 0.2$
$10^{-5}$ M CER	$1.48\pm 0.2$	$0.79\pm 0.2$	$-0.7\pm 0.02$	$-6.8\pm 0.1$	$-7.5\pm 0.3$

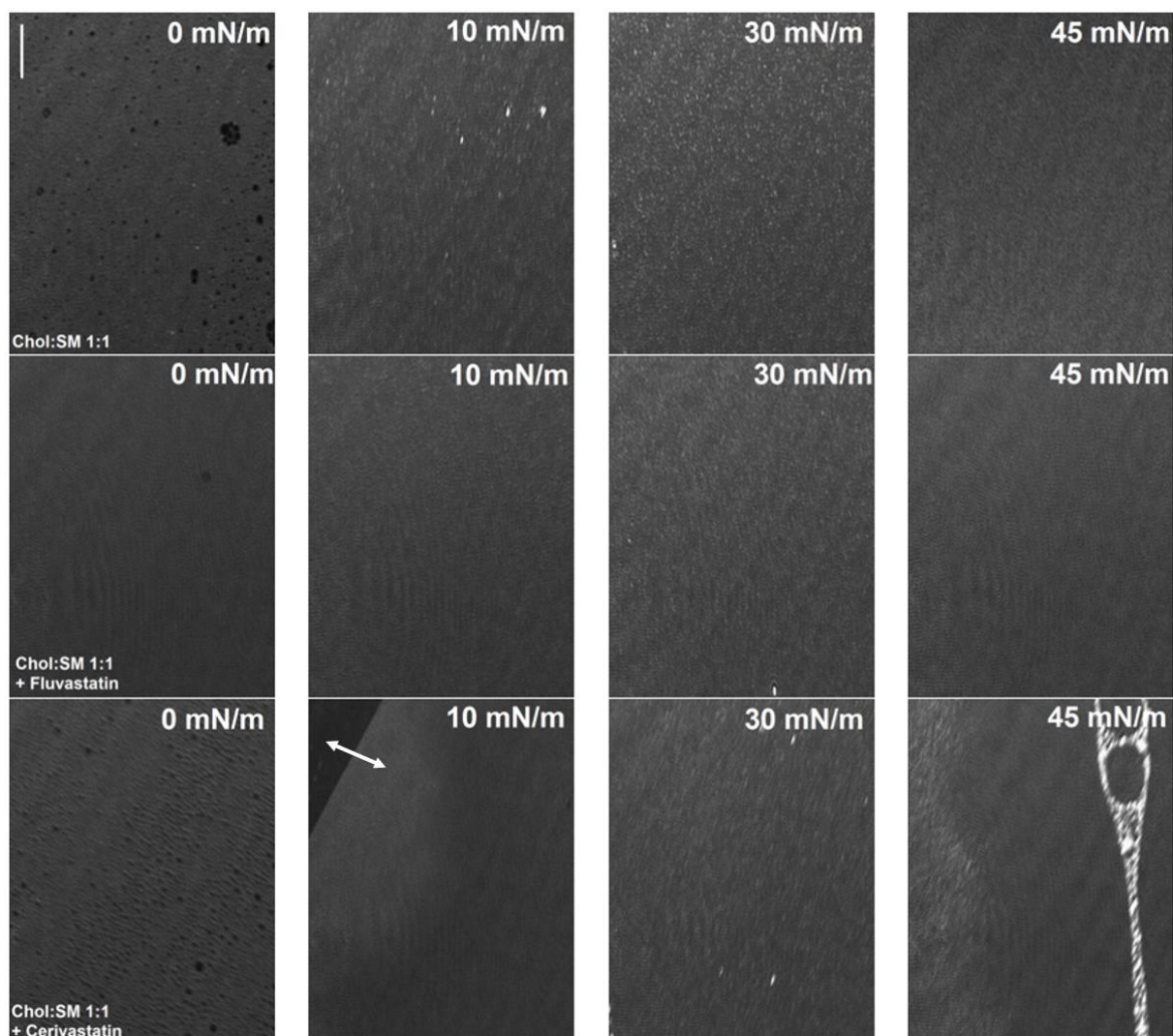


Figure S4. BAM pictures obtained at selected surface pressures for Chol:SM 1:1 monolayers formed on PBS buffer pH 7.4 and PBS pH 7.4 containing  $10^{-5}$  M statins ( $T=21\pm 1^\circ\text{C}$ ). The scale bar is 100  $\mu\text{m}$ .