Biophysical Journal, Volume *111*

Supplemental Information

Effect of Statins on the Nanomechanical Properties of Supported Lipid Bilayers

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Effect of statins on the nano-mechanical properties of supported lipid bilayers

Lorena Redondo-Morata[a], R. Lea Sanford[b], Olaf S. Andersen[b] and Simon Scheuring[a*]

[a] U1006 INSERM, Aix-Marseille Université, Parc Scientifique et Technologique de Luminy, 163 avenue de Luminy, 13009, Marseille, France

[b] Department of Physiology and Biophysics, Weill Cornell Medical College, 1300 York Avenue, New York, NY 10065, USA

[*] Correspondence to: simon.scheuring@inserm.fr

SUPPORTING MATERIAL

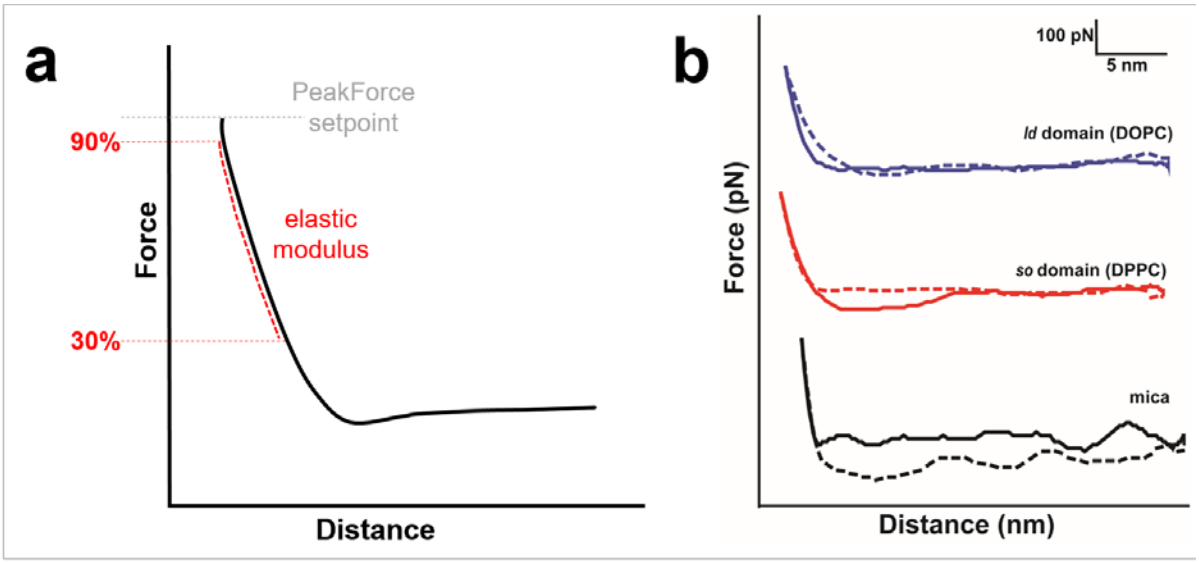

Figure S1) (a) Schematics of the mechanical parameters obtained from force-distance curves. The dashed grey line shows the maximum force of the setpoint during PeakForce imaging. The red line represents the range of the curve that was used to extract the elastic modulus (from 30% to 90% of the PeakForce setpoint).. b) Representative approach (dashed lines) and retract (solid lines) force-distance curves acquired on bare mica (black curves) , s_o DPPC (red curves) and l_o DOPC (blue curves). For clarity, the three curves have been vertically offset.

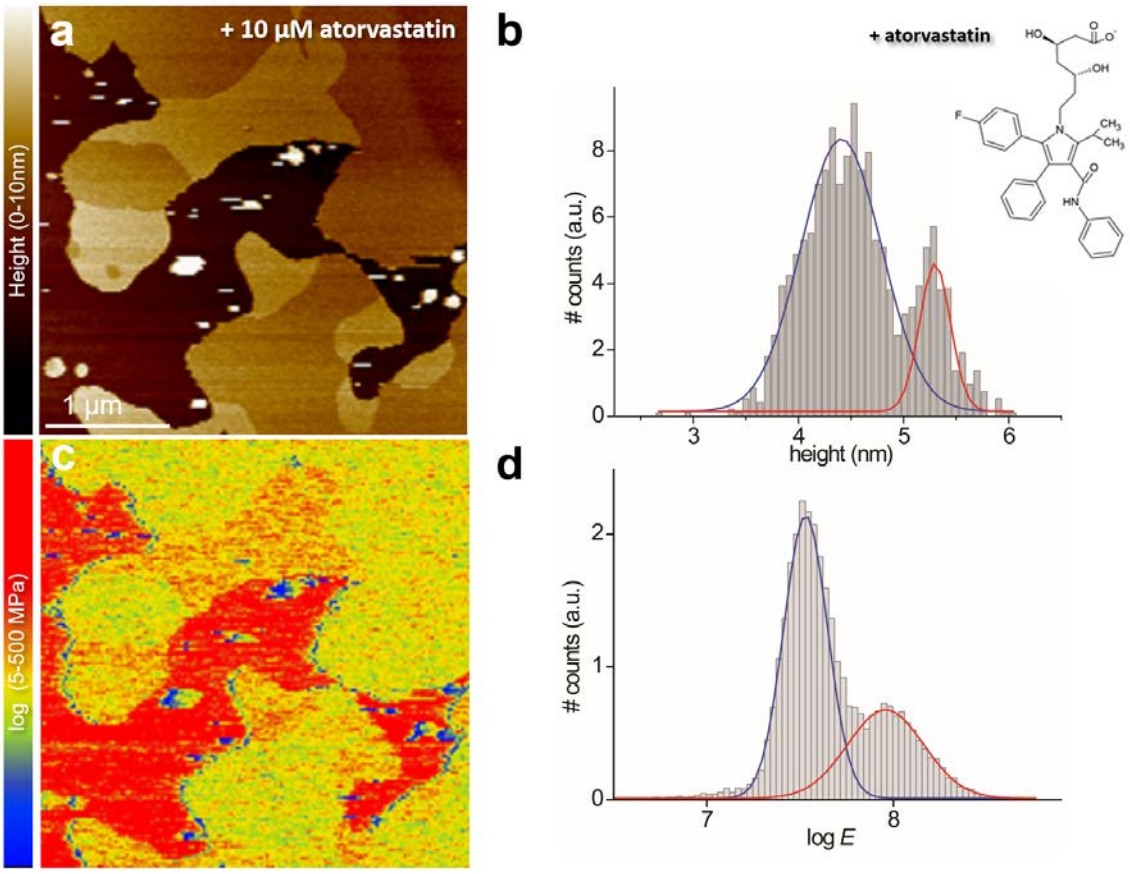

Figure S2) PF-QNM AFM Topography and Elasticity mapping of DOPC:DPPC (1:1) SLBs after addition of atorvastatin. a) Representative topography image (nm) and **b)** height histogram analysis of topography (a) of a DOPC:DPPC (1:1) SLBs after ~1 h of incubation with ~ 10 µM atorvastatin. The solid lines in b) are Gaussian fits to the height distribution of the whole image, indicating an average height difference between the l_d (blue line) and s_o (red line) domains of 0.98 nm. **c)** Corresponding stiffness map (log scale, MPa) and **d)** Young's modulus values histograms (log scale, MPa) of the regions outlined in the topography (a) and stiffness (c) maps, corresponding to l_d (blue) and s_o (red) domains. The solid lines are Gaussian fits to the distributions peaking at 65^{+117}_{-35} MPa (s_o) and 31^{+48}_{-21} MPa (l_d).