Supplementary material to

Natamycin interferes with ergosterol-dependent lipid phases in model membranes

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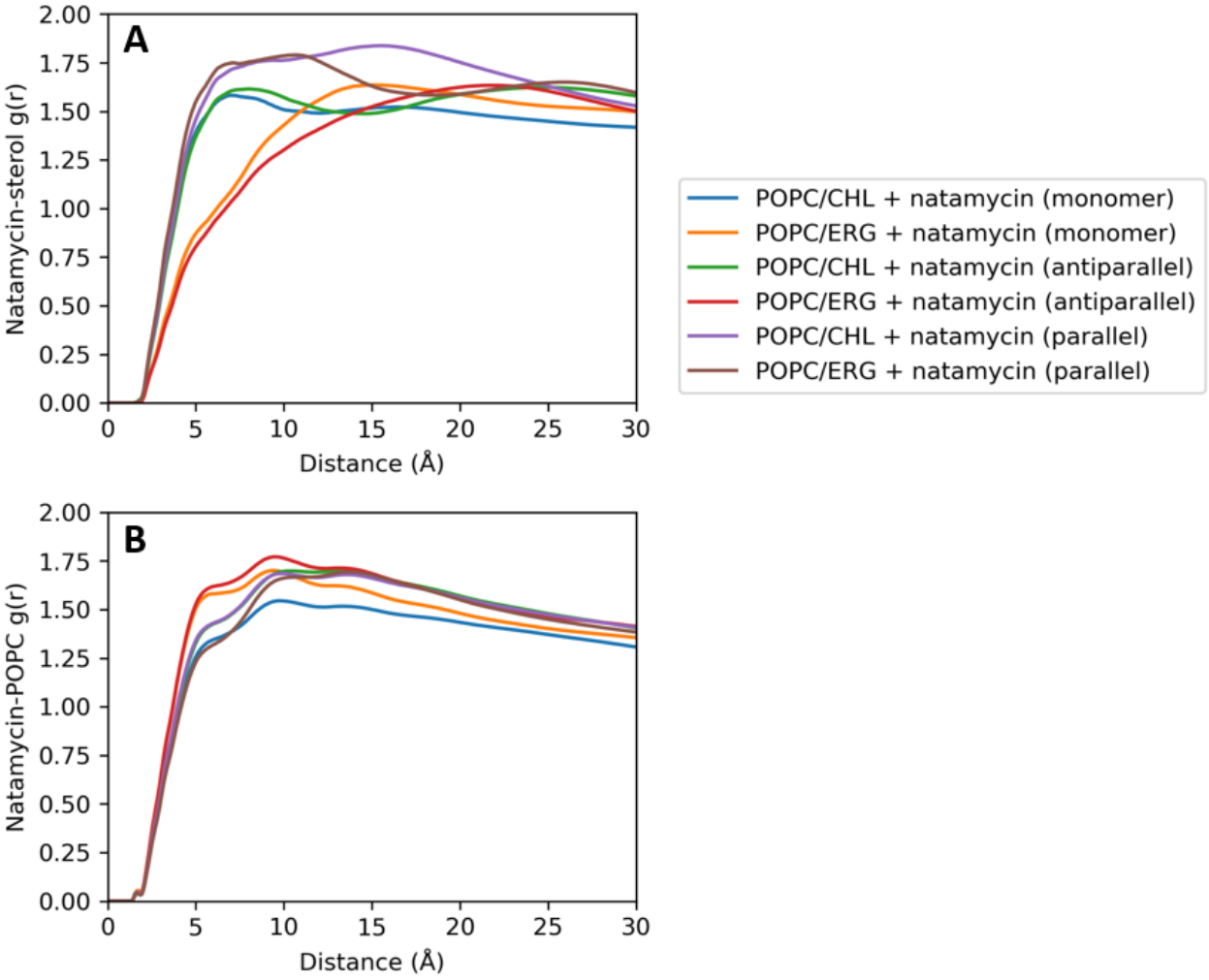

Figure S1. Average distance of natamycin to POPC and sterols in lipid membranes
Based on MD trajectories, the radial distribution function (RDF) was calculated between natamycin (monomer, antiparallel and parallel dimer) and sterols (cholesterol or ergosterol) (A) or natamycin and POPC (B). See main text for further explanations.

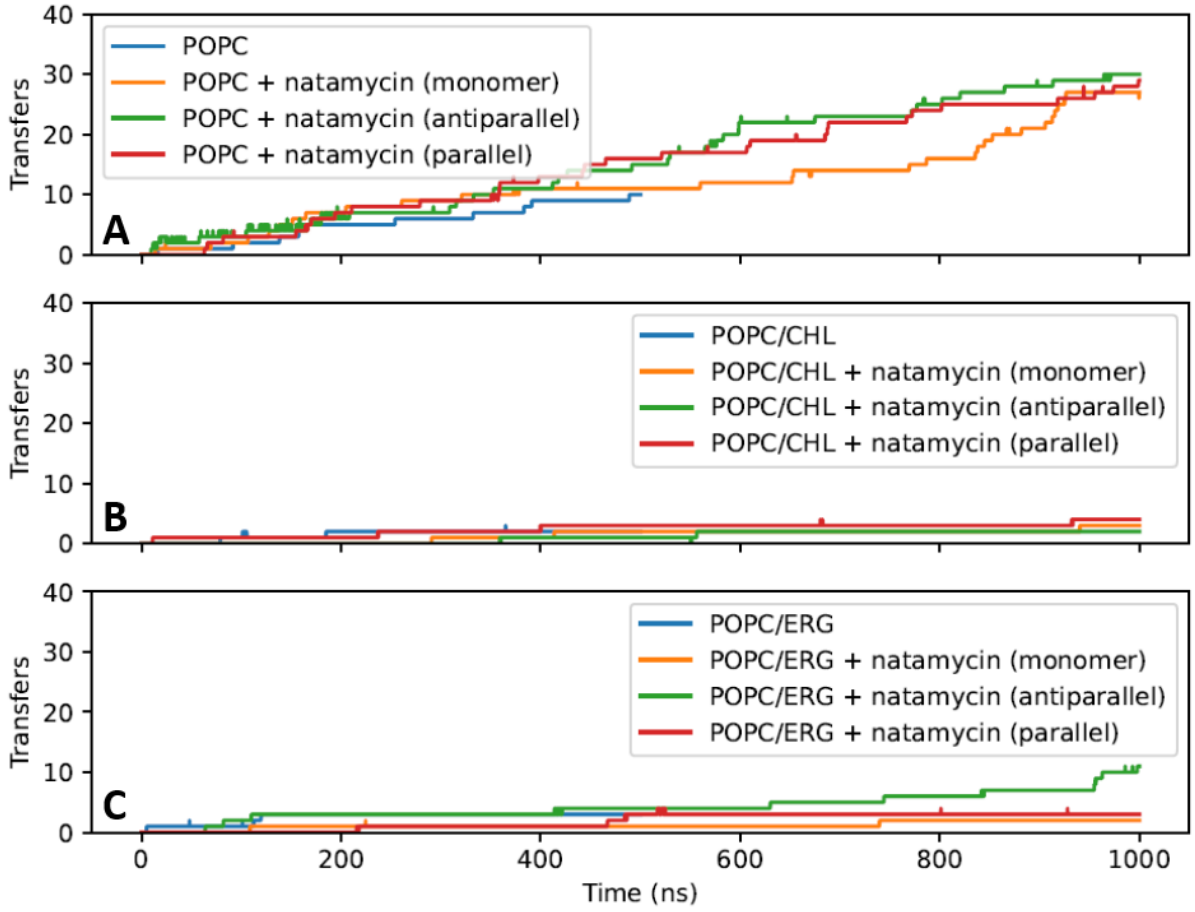

Figure S2. Natamycin causes a slight increase in water permeability of lipid membranes. The combined number of water transfers (in either direction) is plotted as a function of time for POPC (A), POPC/cholesterol (B), and POPC/ergosterol membranes (C). The individual color lines show data for pure membranes, and membranes incorporating natamycin as monomers, antiparallel dimers, or parallel dimers.

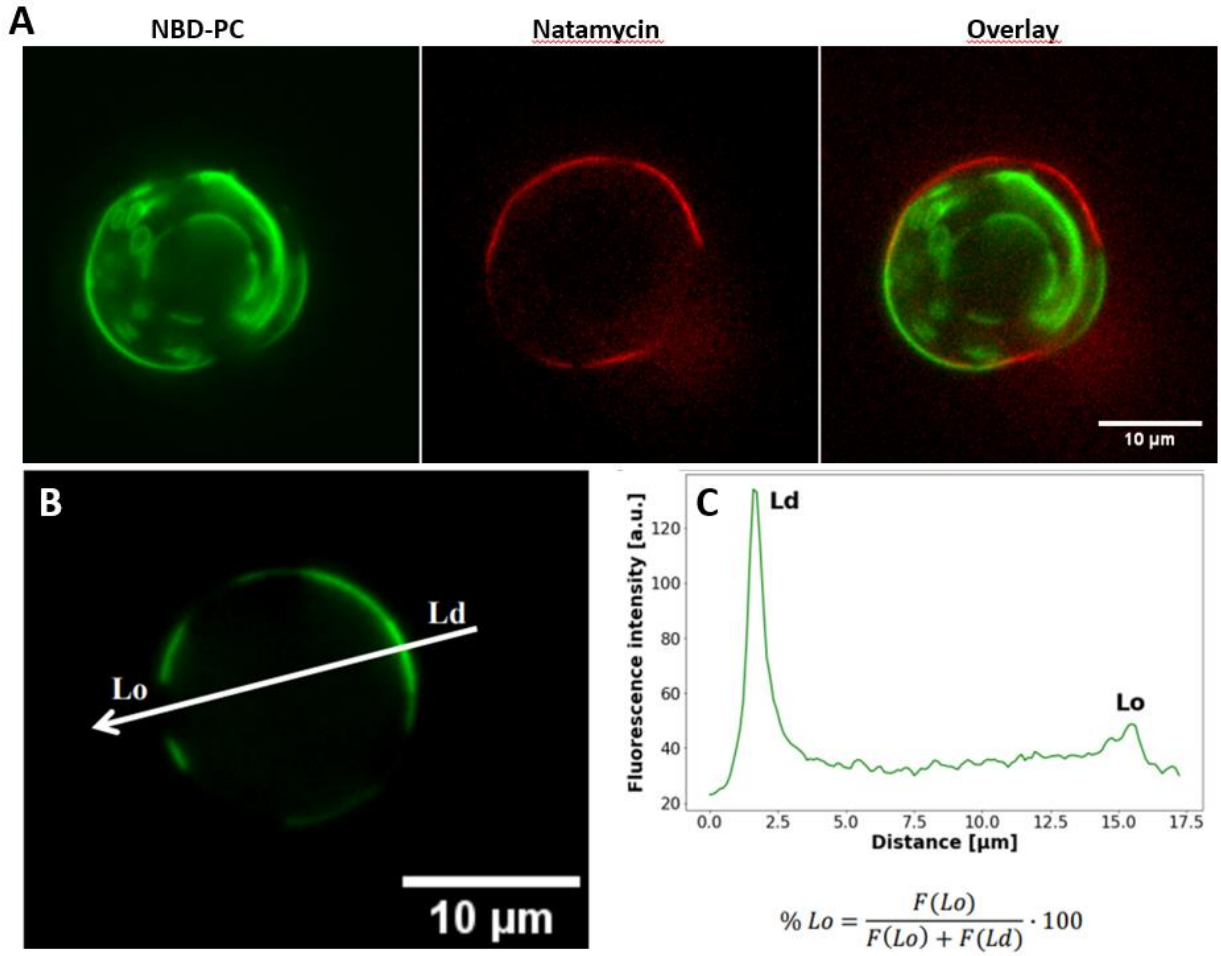

Figure S3. Further analysis of natamycin binding to giant vesicles.
Natamycin does not have access to internal membranes in giant multilamellar vesicles made of POPC/SSM/ergosterol (1:1:1; A). The same result was found for multilamellar vesicles containing cholesterol (not shown). The procedure for determining the domain partitioning illustrated for the Ld marker NBD-PC: a line is drawn from the liquid-disordered (L_d) phase through the liquid-ordered (L_o) phase indicated by the white arrow in the upper panel (B). From the marked line, an intensity profile is obtained as illustrated in the lower panel (C). The fluorescence intensity of the Ld and the Lo (F(Ld)and (F(Lo)) are used to calculate the partitioning coefficient (Lo%) using the equation illustrated at the bottom. These figures were created with inspiration from E. Sezgin et al. (2012) [1].

Additional references

[1] E. Sezgin, I. Levental, M. Grzybek, G. Schwarzmann, V. Mueller, A. Honigmann, V.N. Belov, C. Eggeling, U. Coskun, K. Simons, P. Schwille, Partitioning, diffusion, and ligand binding of raft lipid analogs in model and cellular plasma membranes., Biochimica et biophysica acta, 1818 (2012) 1777-1784.