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Supporting Information For:

Time-Resolved SANS Reveals Pore-Forming Peptides Cause Rapid Lipid Reorganization

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Dynamic Light Scattering (DLS)

Condition of DMPC LUVs		LUV Diameter (nm)	*% Polydispersity*
Peptide-Free[a]		140.9 ± 9.9	14.1
h-LUVs[a]		135.5 ± 8.5	12.6
d-LUVs[a]		138.5 ± 8.5	12.3
Alamethicin	**P/L= 1/1000**	146.9 ± 13.4	18.2
	1/150	137.3 ± 8.7	12.6
	1/40	148.1 ± 12.9	17.4
Melittin	**1/1000**	136.0 ± 8.1	11.9
	1/150	143.6 ± 9.5	13.3
	1/40	131.8 ± 6.3	9.5

[a]Measured prior to methanolic peptide addition

Table S1. Hydrodynamic diameter and Polydispersity (PD) of DMPC LUVs. Samples were diluted 100-fold with H_2O and measured at 30ºC after temperature equilibration to ensure fluid phase bilayers. The lack of change in hydrodynamic diameter and PD after peptide incubation and small angle neutron scattering measurements (~72 hours after mixing) suggests a lack of vesicle fusion.

Circular Dichroism (CD)

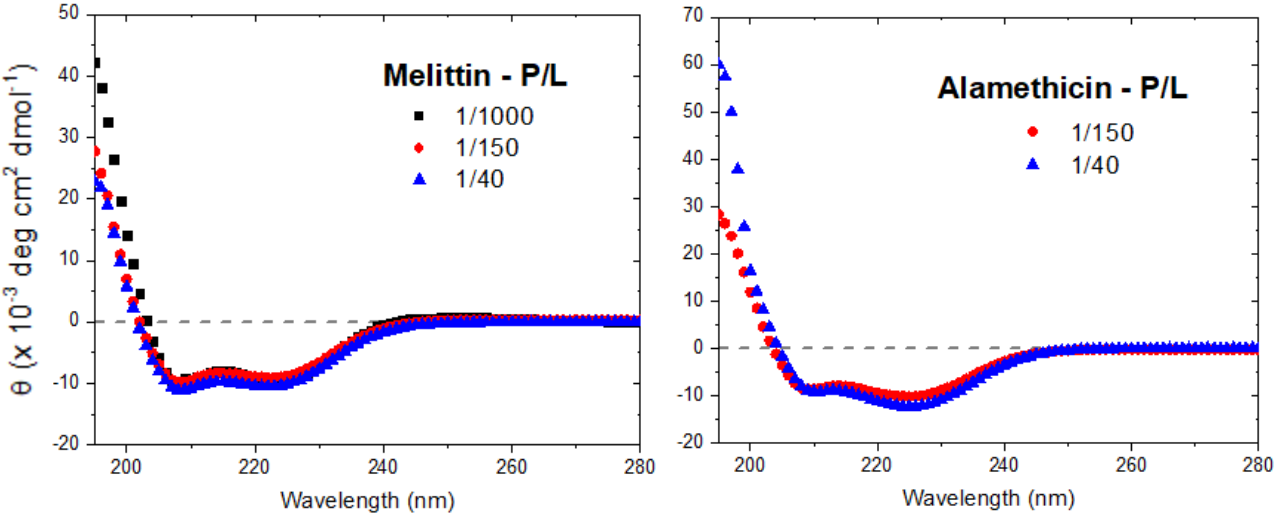

Figure S1. Melittin (left) and alamethicin (right) CD spectra. Data is displayed as mean residue ellipticity. Confirmation of peptide secondary structure after experimental conditions and measurements. CD Spectra show the typical α-helical pattern demonstrated for melittin[1] and alamethicin[2] samples. Alamethicin at P/L = 1/1000 had a signal too low to measure.

References

[1] De Jongh, H. H. J., Goormaghtigh, E., Killian, J. A., De Jongh, H. H. J., Goormaghtigh, E.,Killian, J. A., … Goormaghtigh, E. (1994). Analysis of Circular Dichroism Spectra of Oriented Protein–Lipid Complexes: Toward a General Application. *Biochemistry*, *33*(48), 14521–14528. https://doi.org/10.1021/bi00252a019.

[2] Wu, Y., Huang, H. W., & Olah, G. A. (1990). Method of oriented circular dichroism. *Biophysical Journal*, *57*(4), 797–806. https://doi.org/10.1016/S0006-3495(90)82599-6