

SUPPLEMENTARY MATERIAL

The unusual aggregation and fusion activity of the antimicrobial peptide W-BP100 in anionic vesicles

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Supplementary Video S3. Confocal microscopy imaging of POPC:POPG (1:1) GUVs incubated with W-BP100 (P/L = 2.5).

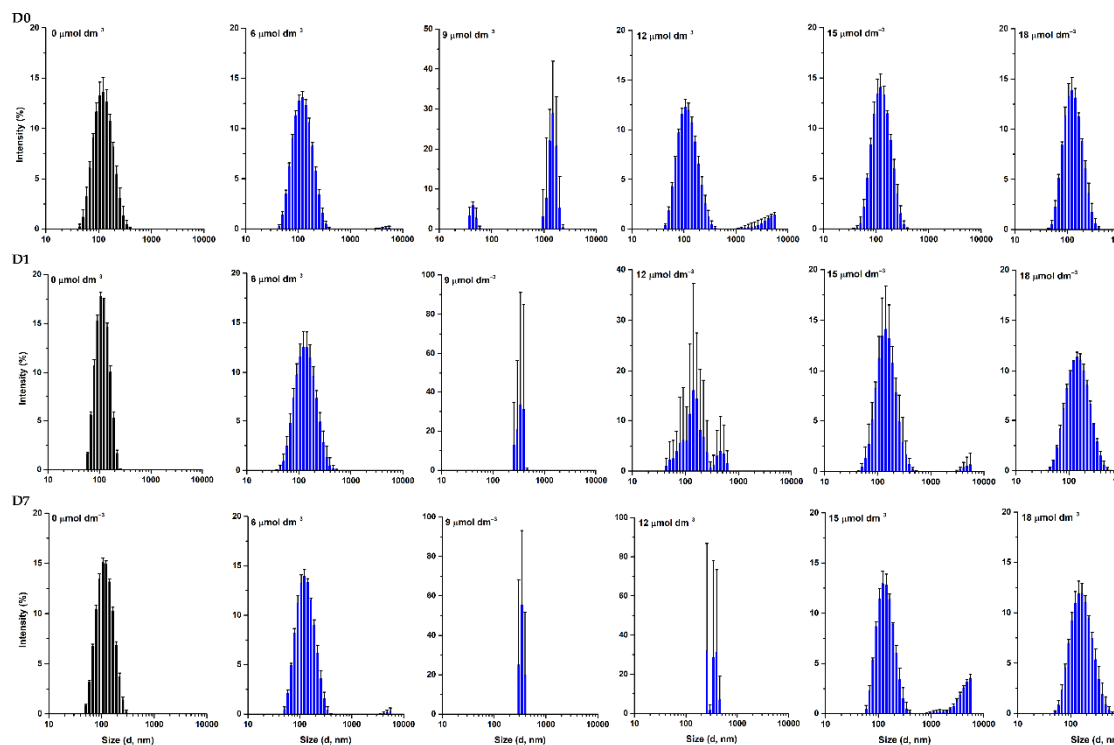


Figure S1. Intensity-weighted size distribution of POPC:POPG (1:1) LUVs in the presence of W-BP100 obtained by DLS. Intensity-weighted size distribution of $100 \mu\text{mol dm}^{-3}$ POPC:POPG (1:1) LUVs in the absence (black) and presence (blue) of increasing W-BP100 concentrations, at day 0 (10 min upon peptide incubation), 1 and 7 upon peptide incubation, at $25.0 \pm 0.1^\circ\text{C}$. d stands for vesicle diameter. Data are the mean \pm SD of three replicate measurements (one single experiment).

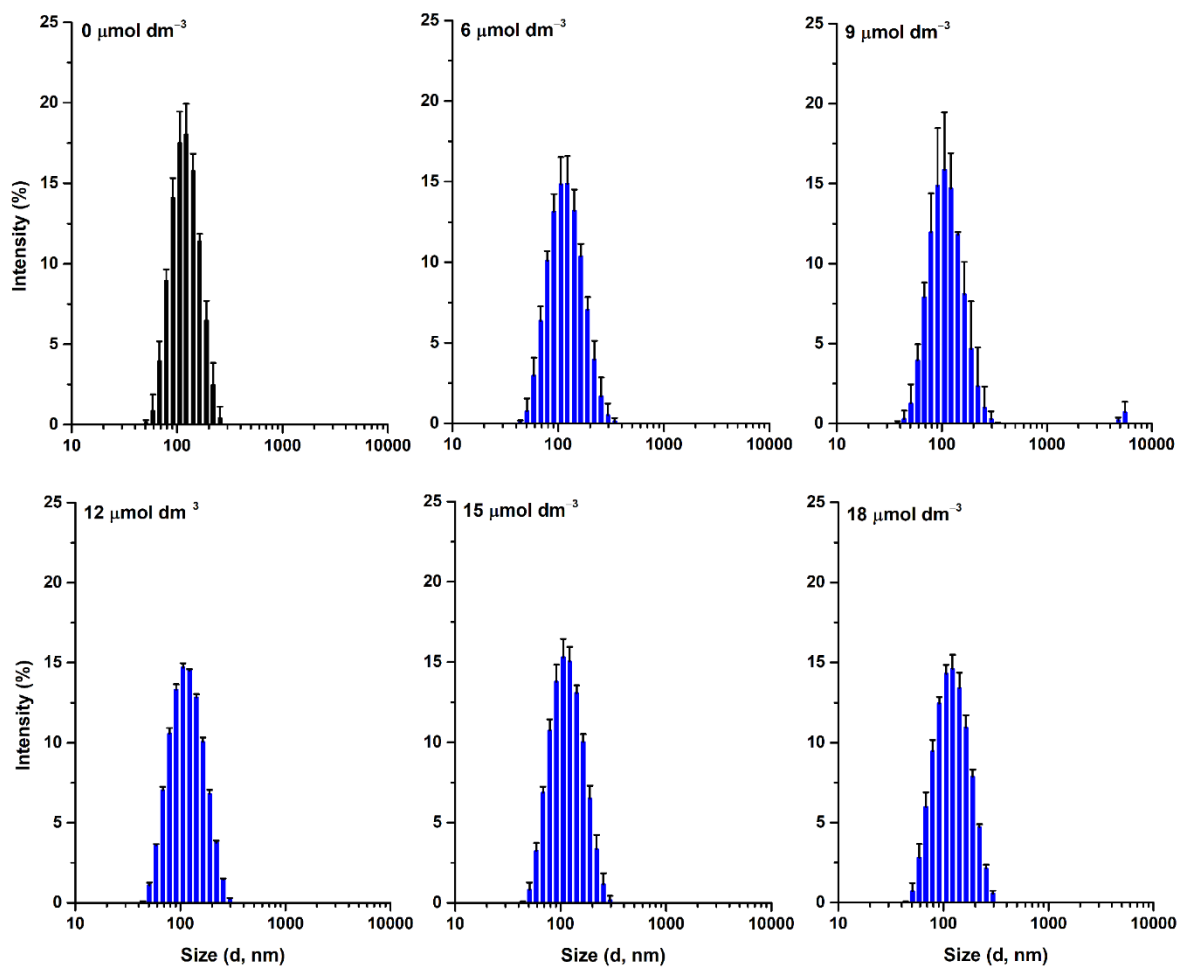


Figure S2. Intensity-weighted size distribution of POPC:POPG (3:1) LUVs in the presence of W-BP100 obtained by DLS. Intensity-weighted size distribution of $100 \mu\text{mol dm}^{-3}$ POPC:POPG (3:1) LUVs in the absence (black) and presence (blue) of increasing W-BP100 concentrations, at $25.0 \pm 0.1^\circ\text{C}$. d stands for vesicle diameter. Data are the mean \pm SD of three replicate measurements (one single experiment).

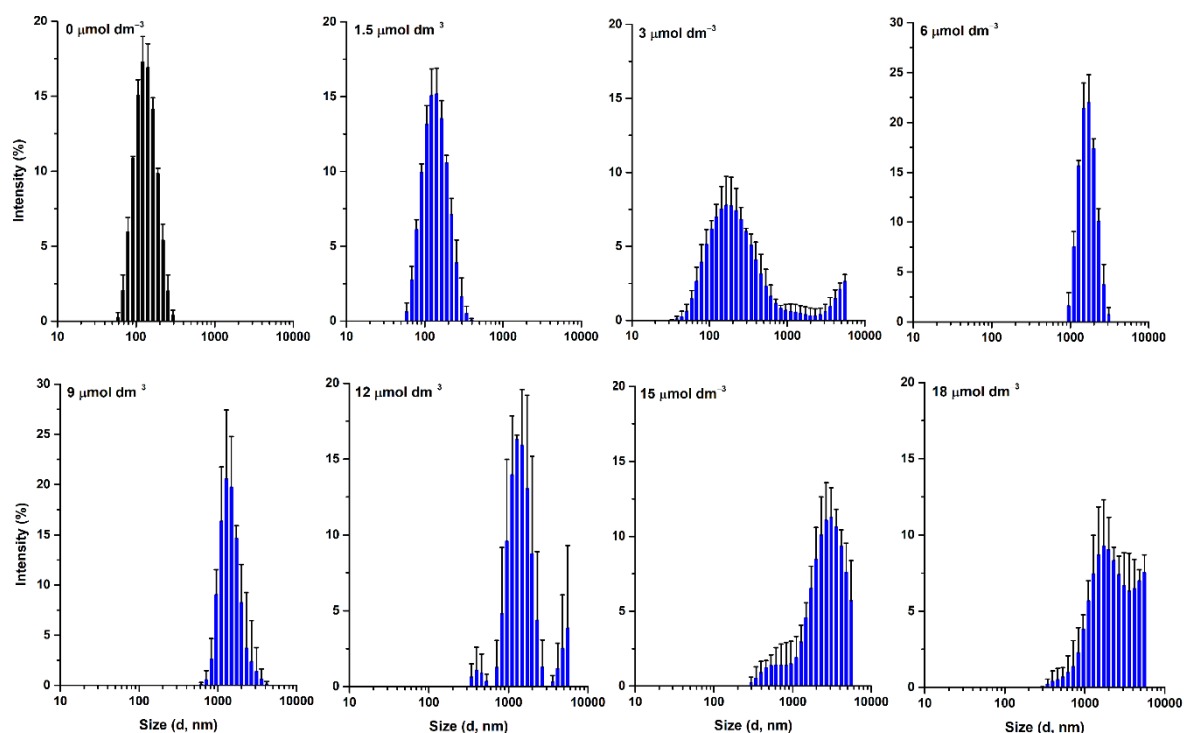


Figure S3. Intensity-weighted size distribution of POPE:POPG (1:1) LUVs in the presence of W-BP100 obtained by DLS. Intensity-weighted size distribution of $100 \mu\text{mol dm}^{-3}$ POPE:POPG (1:1) LUVs in the absence (black) and presence (blue) of increasing W-BP100 concentrations, at $25.0 \pm 0.1^\circ\text{C}$. d stands for vesicle diameter. Data are the mean \pm SD of three replicate measurements (one single experiment).

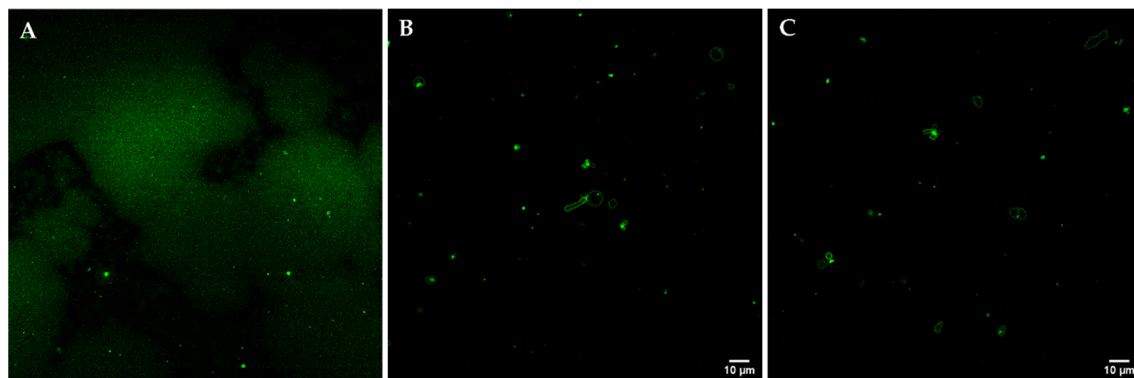


Figure S4. Confocal microscopy imaging of POPC:POPG (1:1) GUVs incubated with W-BP100 ($P/L = 1.2$). 2% NBD-labeled GUVs ($\sim 48 \mu\text{mol dm}^{-3}$) were incubated with W-BP100 for 10 min and images were acquired under a $63\times$ -oil objective, over 10 min, with 10 s interval between frames. (A) Adhesion of NBD FLLs to the bottom of the petri dish due to GUV destruction. (B) Formation of elongated vesicles with tubular-like morphology. (C) Formation of large aggregates constituted by small lipid-like vesicles. Magnification: $630\times$. Scale bar: $10 \mu\text{m}$.

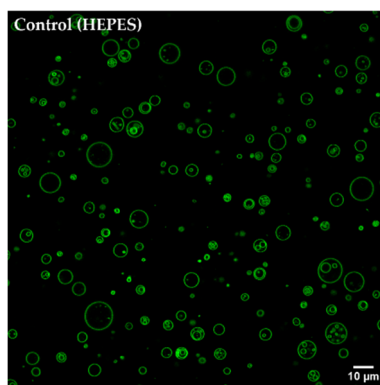


Figure S5. Confocal microscopy imaging of POPC:POPG (1:1) GUVs incubated with HEPES buffer. An equal volume of HEPES buffer, the solvent of the peptide stock solution, was added to the 40 μL drop of GUVs used for image analysis (control). The volume added (11 μL) corresponded to the total volume of peptide added to obtain the final P/L ratio tested (P/L = 2.5). Magnification: 630 \times . Scale bar: 10 μm .



Video S1.avi

Video S1. Confocal microscopy imaging of POPC:POPG (1:1) GUVs incubated with W-BP100 (P/L = 0.8). 2% NBD-labeled GUVs ($\sim 48 \mu\text{mol dm}^{-3}$) were incubated with W-BP100 for 10 min and images were acquired under a 63 \times -oil objective, over 10 min, with 10 s interval between frames. Magnification: 630 \times . Scale bar: 10 μm .



Video S2.avi

Video S2: Confocal microscopy imaging of POPC:POPG (1:1) GUVs incubated with W-BP100 (P/L = 1.7). 2% NBD-labeled GUVs ($\sim 48 \mu\text{mol dm}^{-3}$) were incubated with W-BP100 for 10 min and images were acquired under a 63 \times -oil objective, over 10 min, with 10 s interval between frames. Magnification: 630 \times . Scale bar: 10 μm .



Video S3.avi

Video S3: Confocal microscopy imaging of POPC:POPG (1:1) GUVs incubated with W-BP100 (P/L = 2.5). 2% NBD-labeled GUVs ($\sim 48 \mu\text{mol dm}^{-3}$) were incubated with W-BP100 for 10 min and images were acquired under a 63 \times -oil objective, over 10 min, with 10 s interval between frames. Magnification: 630 \times . Scale bar: 10 μm .