

Supporting Information for

Electrochemiluminescence microscopy for the investigation of peptides interactions within planar lipid membranes

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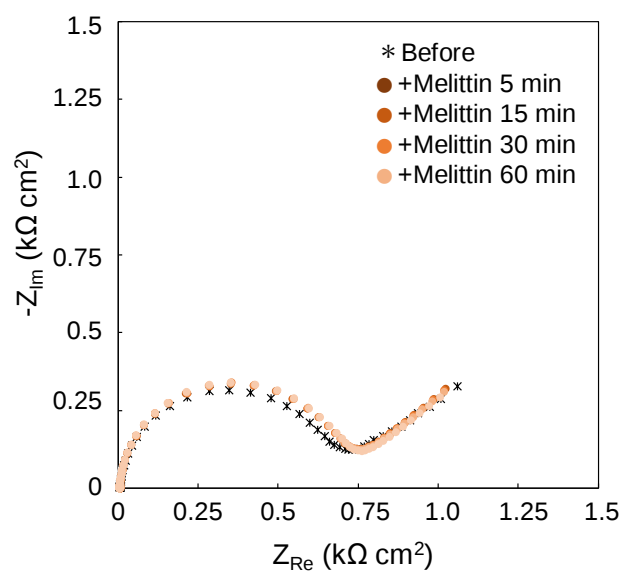


Fig. S1

EIS measurement on APTES-coated electrode in 2 mM ferricyanide/ferrocyanide solution. The cross-mark represents the curve before the addition of melittin, whereas the shaded dots depict the time course after the addition of melittin. Frequency range: 0.1–10⁵ Hz, holding potential: 0.26 V, perturbation: 10 mV.

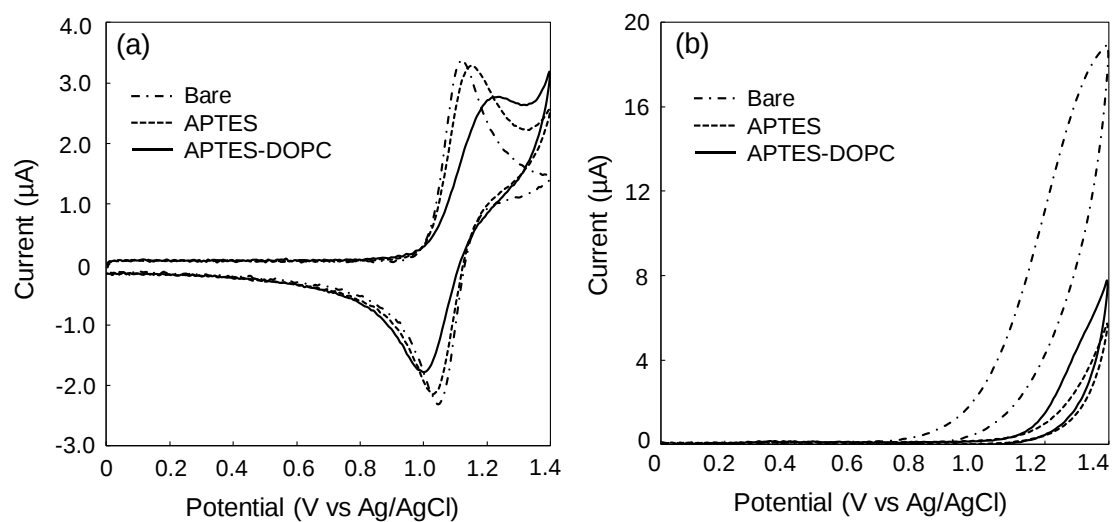


Fig. S2

CV of bare, APTES-coated and DOPC membrane formed electrode in the solution containing (a) 400 μM $[\text{Ru}(\text{bpy})_3]^{2+}$ and (b) 25 mM TPrA in PBS. Scan rate: 0.1 V/s.

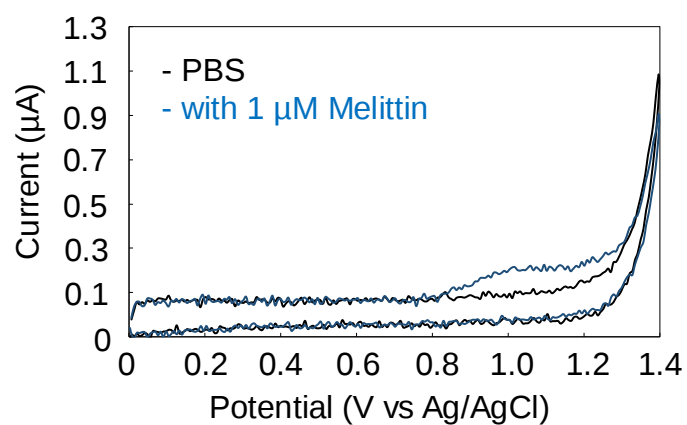


Fig. S3

CVs of the DOPC membrane formed electrode in before and after the addition of melittin. Black curve is the CV in PBS, whereas blue curve is the CV after the addition of 1 μM melittin. Scan rate: 0.1 V/s.

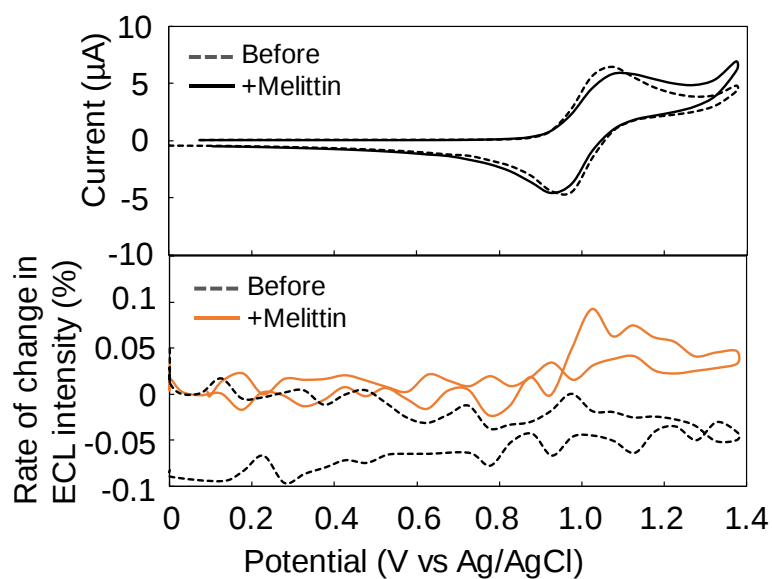


Fig. S4

The current and ECL intensity traces on a DOPC membrane-formed electrode in the ECL solution containing 800 μM $[\text{Ru}(\text{bpy})_3]^{2+}$ in PBS. The dashed line is the curve before the addition of melittin, while the solid line is the curve after the addition of melittin. ECL intensity was normalized to the mean intensity values between 0 and 0.2 V and plotted as the rate of change.

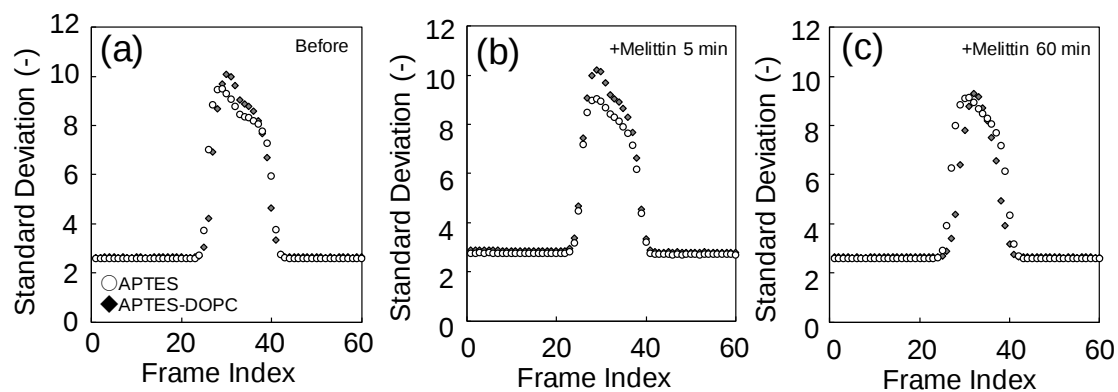


Fig. S5

Standard deviation (SD) values on an APTES-coated (○) and a DOPC membrane formed (◆) electrode along with the ECL image acquisition. 400 μM $[\text{Ru}(\text{bpy})_3]^{2+}$ /25 mM TPrA in PBS. (a) before the addition of melittin, (b) and (c): 5 and 60 min after the addition of melittin.

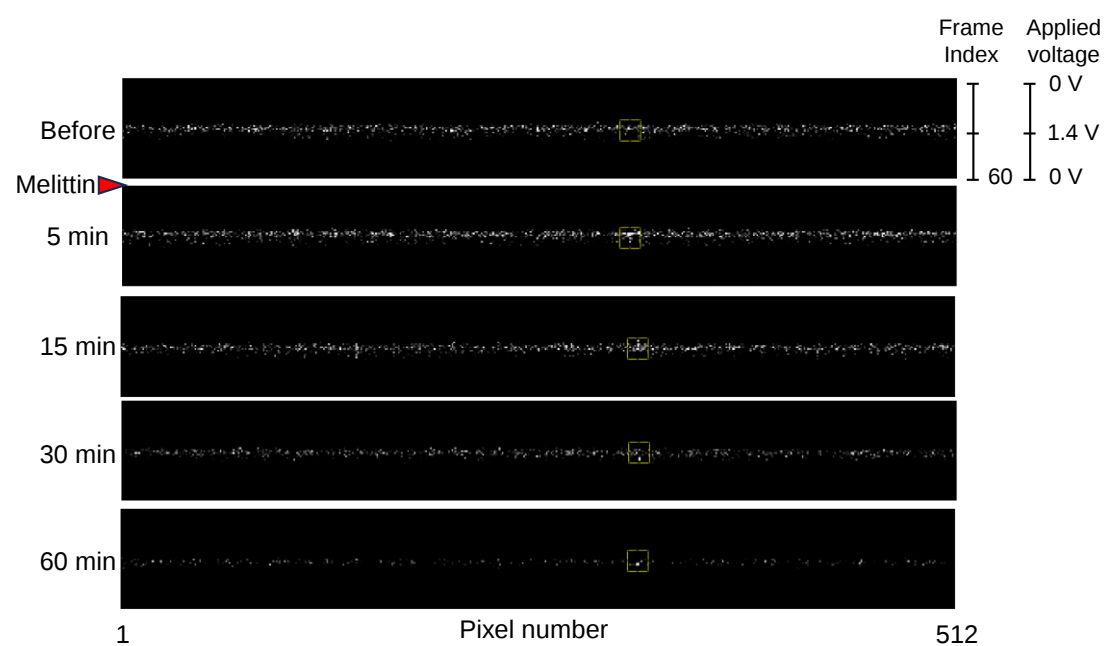


Fig. S6
ECL images of 512 pixels during the CV scan, another resliced section than Fig. 5. The yellow boxes indicate the time-course ECL images of 13 pixels used in Fig. 5c(iii).