Supporting Information

SELECTIVE RECOGNITION AND IMAGING OF BACTERIAL MODEL MEMBRANES OVER MAMMALIAN ONES BY USING CATIONIC CONJUGATED POLYELECTROLYTES.

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Theoretical curve in figure 2b and 4b (inset) were obtained by using following equation by calculating the theoretical quenching efficiency ($\eta_{expected}$):

$$\eta_{expected} = (1 - I^t / I_0^t) \times 100$$
 (eq. S1)

where, I_0^t and I^t stand for the CPEs fluorescence intensities in the absence and presence of the quencher, respectively. The values expected for these intensities if the CPE had the same preference for both model membranes can be estimated as:

$$I_0{}^t = (\chi^M \ I_P{}^M) + (\chi^B \ I^B)$$

 $I^t = (\chi^M \ I^M \ \eta^M/100) + (\chi^B \ I^B \ \eta^B/100)$

 χ^{M} and χ^{B} are the lipid molar fraction of the mammalian and bacterial model systems in the mixture, respectively.

 I^{M} and I^{B} are the fluorescence intensities obtained experimentally from CPE either in mammalian or bacterial model membrane, respectively . For HTMA-PFP, the ratio $I^{B} / I^{M} = 1.35$ (Figure 1c), while for HTMA-PFNT, $I^{B} / I^{M} = 1$ (Figure 3c).

 η^{M} and η^{B} are the percentage of quenching efficiencies when the sample contains 100% of mammalian or bacterial membranes, respectively. These values were $\eta^{M} = 50\%$ and $\eta^{B} = 92\%$ for HTMA-PFP and HTMA-PFNT in the presence of 50 and 200 μ M of AQS, respectively (Figures 2a and 4a).



Figure S1: Fluorescence emission spectra of HTMA-PFNT (1.5 μ M) in buffer with increasing concentrations of DOPG. Inset: Differences in fluorescence intensity by increasing the DOPG concentration compared to DOPC (λ_{exc} =510 nm).



Figure S2: Absorption spectra of HTMA-PFP (1.5 μ M) in buffer (black), bacterial (red) and mammalian (blue) model membranes.