

## **SUPPORTING MATERIAL**

For: “Detergent properties influence the stability of the Glycophorin A transmembrane helix in lysophosphatidylcholine micelles”

by M. Stangl et al.

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## SUPPORTING TABLES

Table S1: Apparent GpA TM domain dissociation constants in lyso-PC micelles.

lyso-PC	$c$ mM	app $K_D$	Excess detergent (mol:mol)	Excess micelles (mol:mol)
<b>C10</b>	10.69	0.003	21380	232
	12.15	0.023	24300	305
	13.12	0.072	26240	353
	14.59	0.133	29180	427
	17.01	0.207	34020	548
	29.17	0.577	58340	1156
	38.88	0.678	77760	1641
	48.61	1.246	97220	2128
	58.33	1.405	116660	2614
<b>C11</b>	4.70	0.029	9400	86
	7.05	0.173	14100	156
	10.34	0.373	20680	255
	11.75	0.534	23500	297
	14.10	0.706	28200	367
	18.80	0.729	37600	507
	23.50	0.863	47000	647
	32.90	1.177	65800	928
	42.30	1.292	84600	1209
	61.10	1.705	122200	1770
<b>C12</b>	2.28	0.001	4560	42
	3.41	0.054	6820	69
	4.56	0.101	9120	97
	6.83	0.330	13660	153
	9.12	0.459	18240	209
	11.38	0.658	22760	264
	15.93	0.925	31860	375
	22.75	1.486	45500	541
	34.13	2.449	68260	819
	56.88	2.735	113760	1373
<b>C13</b>	1.41	0.003	2820	26
	2.12	0.139	4240	40
	4.41	0.202	8820	87
	6.60	0.340	13200	132
	11.00	0.774	22000	221
	17.60	1.398	35200	356
	26.50	2.146	53000	538

	44.10	2.656	88200	897
	61.70	2.193	123400	1256
<b>C14</b>	0.64	0.001	1280	10
	0.86	0.090	1720	13
	1.07	0.214	2140	16
	2.14	0.638	4280	33
	4.28	1.563	8560	67
	6.42	3.141	12840	101
	8.55	3.461	17100	135
	10.70	4.222	21400	169
	21.40	3.003	42800	339
	34.22	2.642	68440	543
	59.88	2.698	119760	950
<b>C15</b>	0.62	0.011	1240	7
	0.93	0.225	1860	10
	1.25	0.700	2500	14
	2.18	1.776	4360	24
	3.11	4.524	6220	34
	6.23	6.158	12460	68
	9.34	6.840	18680	102
	18.70	11.544	37400	204
	31.20	11.391	62400	341
	62.30	17.513	124600	681
<b>C16</b>	0.49	0.056	980	5
	0.77	0.274	1540	7
	3.03	2.974	6060	29
	6.05	12.935	12100	58
	12.10	23.281	24200	116
	24.21	27.712	48420	232
	36.32	37.716	72640	348
	60.53	11.609	121060	579

## SUPPORTING FIGURES

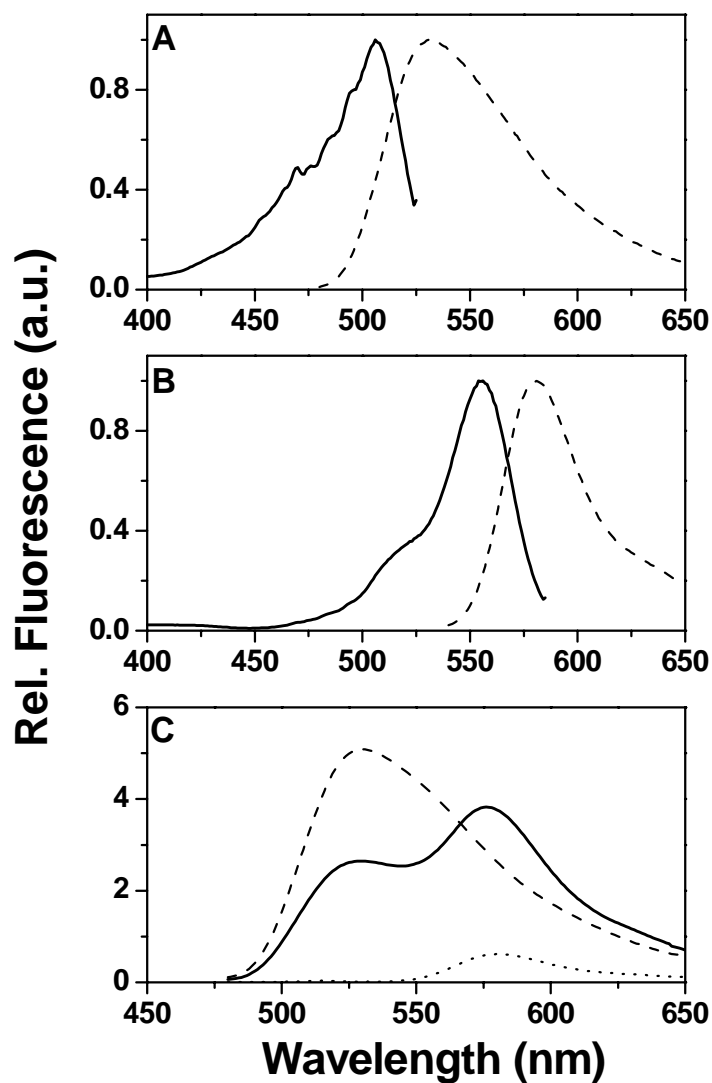


Fig. S1. Excitation (solid lines) and emission spectra (dashed lines) of FI (donor)- and TAMRA (acceptor)-labeled GpA peptides. (A) FI-GpA, excitation  $\lambda = 439$  nm, emission  $\lambda = 530$  nm. (B) TAMRA-GpA, excitation  $\lambda = 530$  nm, emission  $\lambda = 590$  nm. (C) Fluorescence emission spectra of donor- and acceptor-labeled peptides (solid lines) as well as control samples containing only donor-labeled peptides (dashed lines) and only acceptor-labeled peptides (dotted lines) after excitation at 439 nm. The arrow indicates sensitized fluorescence emission of the acceptor fluorophore after donor excitation. Spectra were measured in 10 mM HEPES buffer containing 150 mM NaCl and 5 mM C12 lyso-PC at pH 7.4.

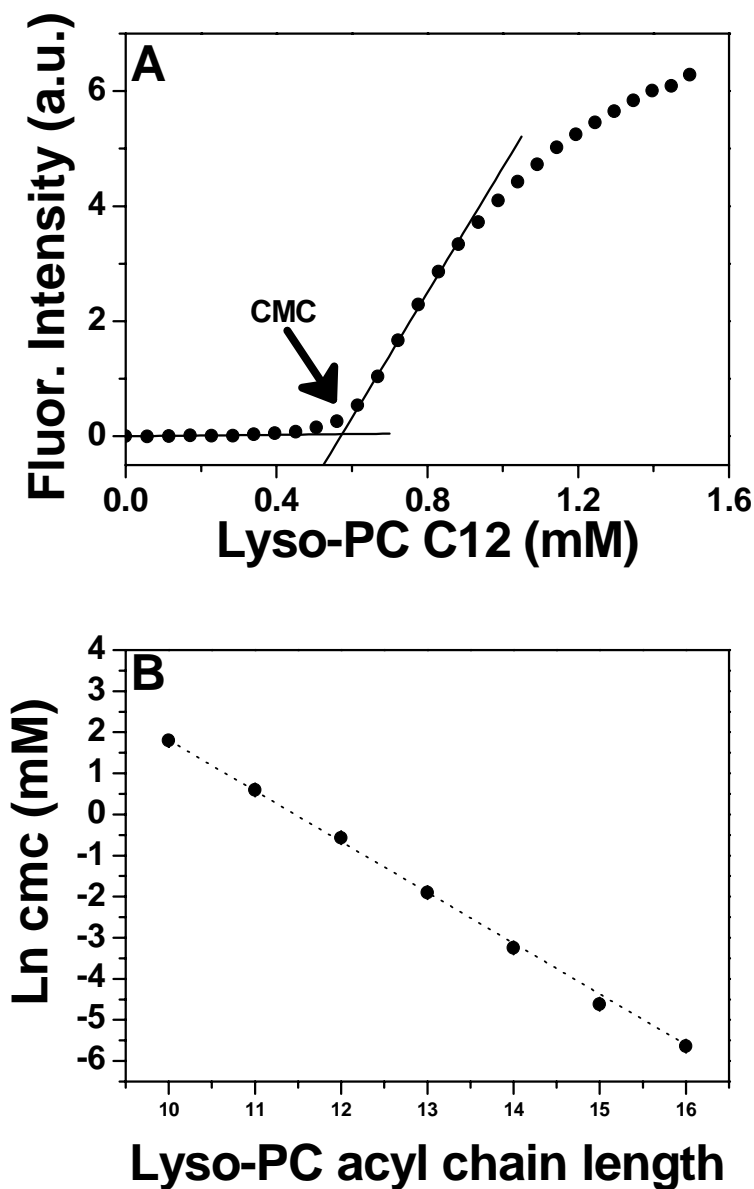


Fig. S2: Critical micellar concentration of lyso-PCs.

(A) Determination of lyso-PC *cmc*'s by fluorescence spectroscopy. Fluorescence intensity of ANS at 490 is plotted as a function of C12 lyso-PC concentration. For each plot, the C12 lyso-PC concentration corresponding to the first break in the slope was taken as the CMC.

(B) Chain-length dependency of the *cmc*'s. The *cmc* of each lyso-PC was determined as described in (A).

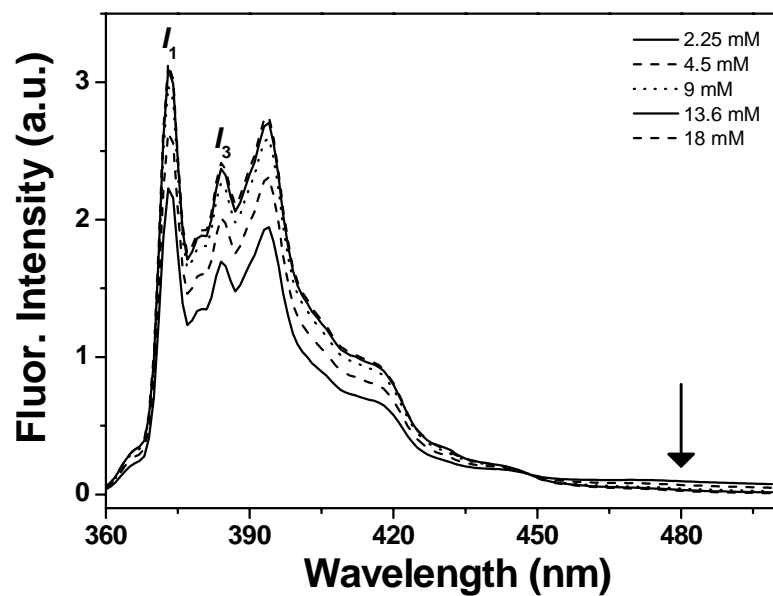


Fig. S3: Representative fluorescence spectra of 2  $\mu$ M pyrene in an aqueous solution of C12 lyso-PC at various concentrations.  $I_1$  and  $I_3$  are the intensity of the first and the third vibronic peaks in the pyrene emission spectra. The arrow at 480 nm indicates absence of an eximer peak at various tested C12 lyso-PC concentrations.