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APPENDICES

APPENDIX A

PREPARATION OF REAGENTS

Preparation of 0.001 Phosphate Buffer

One liter of 0.001 mM phosphate buffer was prepared using

Na_2HPO_4 (MW 141.96)	141.96	mg
NaH_2PO_4 (MW 119.98)	119.98	mg

All ingredients were dissolved in double distilled water with continuously stirring. The solution was adjusted volume to 1000 mL.

Preparation of 0.001 Phosphate Buffer with 10% Acetonitrile

One liter of 0.001 mM phosphate buffer with 10% acetonitrile was prepared using

Na_2HPO_4 (MW 141.96)	141.96	mg
NaH_2PO_4 (MW 119.98)	119.98	mg
Acetonitrile	100.00	mL

All ingredients were dissolved in double distilled water with continuously stirring. The solution was adjusted volume to 1000 mL.

Preparation of 0.001 TRIS Buffer with 10% Acetonitrile

One liter of 0.001 mM TRIS buffer with 10% acetonitrile was prepared using

TRIS (MW 64.63)	64.63	mg
Acetonitrile	100.00	mL

All ingredients were dissolved in double distilled water with continuously stirring. The solution was adjusted volume to 1000 mL.

Ultrafiltration assembly

The 14 mm Ultracel YM-10 was placed, shiny side up, onto a membrane support base. An O-ring was then placed on top of the membrane disc. After that a sample reservoir was placed over the O-ring. The reservoir was compressed slightly and snapped on by plastic clip to support apparatus. Subsequently the unit was inserted into a filtrate cup.

Membrane Preparation

1. Membrane rinse

Ultracel YM-10 was floated skin (glossy) side down in beaker contained double-distilled water for one hour with changing the double-distilled water three times.

2. Membrane storage

Used membranes were rinsed with double-distilled water three times and then stored in a 10% methanol solution in refrigeration. All membranes were used twice and then discarded.

3. Membrane wash

Used membranes were soaked with 0.1 M NaOH solution 20 minutes and then rinsed with double-distilled water three times.

APPENDIX B

THE FLUORESCENCE SPECTRA AND STATISTIC DATA

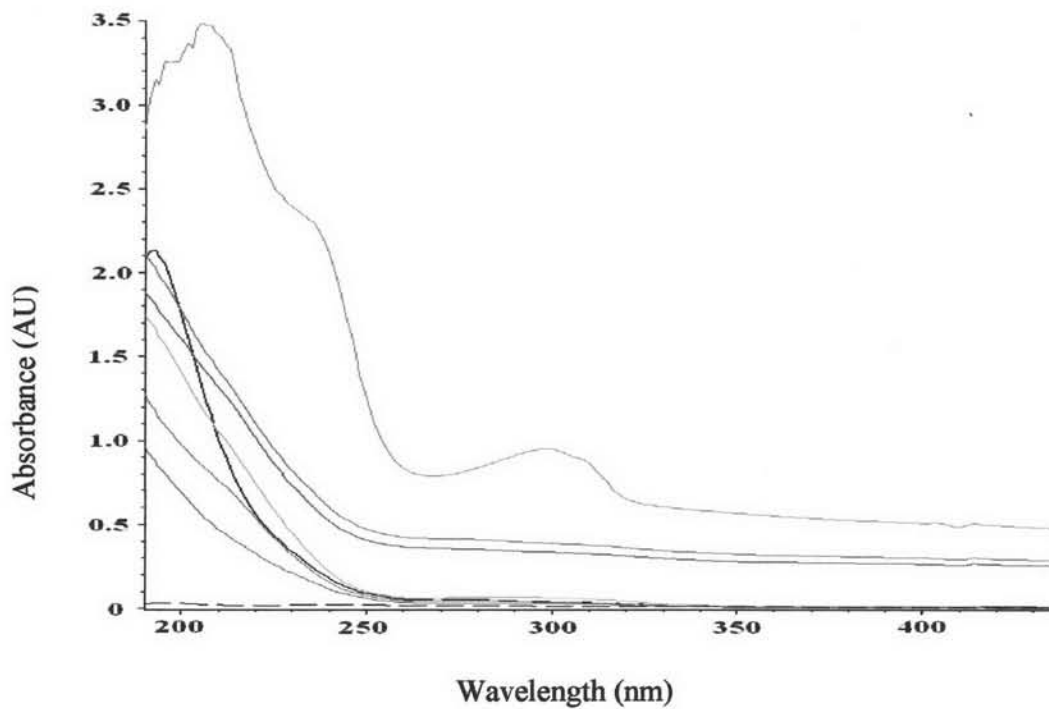


Figure 43 The UV spectra of ultrafiltrates obtained from the mixtures of 0.07 mM PAMAM dendrimer generation 5 and 0.02 to 0.10 mM daptomycin in 0.001 mM Phosphate buffer

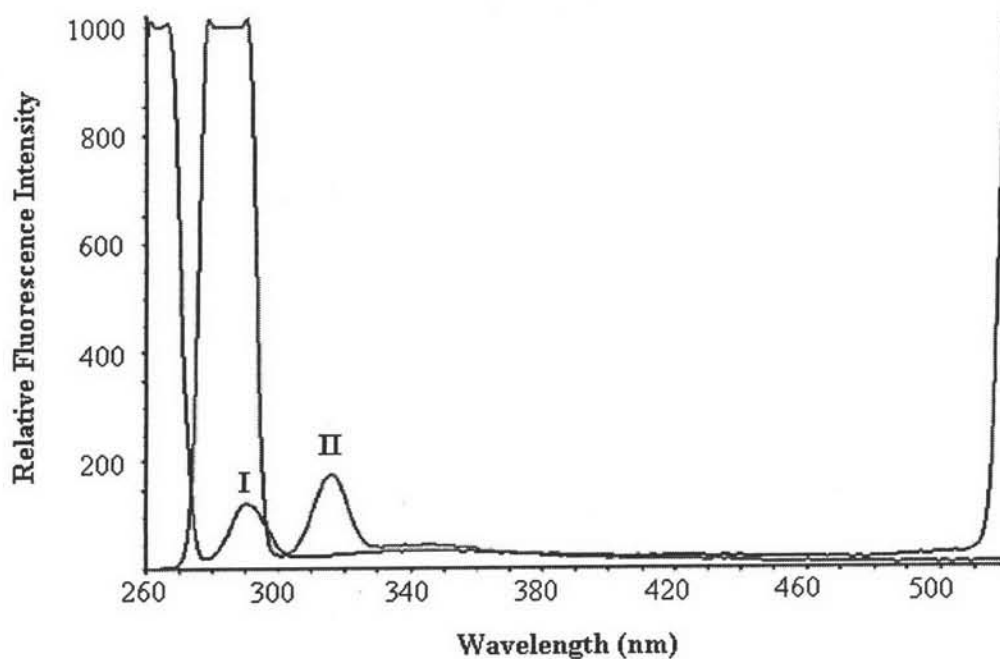


Figure 44 Fluorescence emission spectra of 0.54 μM PAMAM generation 5 at (a) excitation at 260 nm and (b) excitation at 285 using excitation/emission slit width 4/10

Table 17 Table shows the slope of titration curves of daptomycin solution to the blank at all pH ranges

pH	Slope	Intercept	R^2
3	28190	8.26	0.9992
3.5	26630	6.33	0.9977
4	28149	6.94	0.9941
4.5	27908	3.60	0.9936
5	25088	2.94	0.9927
6	26407	2.74	0.9978
7	31080	4.19	0.9993
8	31694	6.28	0.9995
9	31315	11.34	0.9990

Table 18 One-way ANOVA analysis of molar signal coefficient (ΔE) obtained from binding isotherms of daptomycin and PAMAM dendrimer generation 5 at various pH values

ANOVA					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4728.797	6	788.133	3.779	.053
Within Groups	1460.067	7	208.581		
Total	6188.864	13			

Table 19 One-way ANOVA (a) and Post Hoc (b) analysis of dissociation constants (K_d) obtained from binding isotherms of daptomycin and PAMAM dendrimer generation 5 at various pH values

a)

ANOVA					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.036	6	.006	12.972	.002
Within Groups	.003	7	.000		
Total	.039	13			

b)

Multiple Comparisons						
(I) pH	(J) pH	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
3.5	4	.15815*	.02137	.002	.0735	.2428
	4.5	.15685*	.02137	.002	.0722	.2415
	5	.11620*	.02137	.010	.0315	.2009
	6	.10945*	.02137	.014	.0248	.1941
	7	.11090*	.02137	.013	.0262	.1956
	8	.14485*	.02137	.003	.0602	.2295
4	3.5	-.15815*	.02137	.002	-.2428	-.0735
	4.5	-.00130	.02137	1.000	-.0860	.0834
	5	-.04195	.02137	.503	-.1266	.0427
	6	-.04870	.02137	.363	-.1334	.0360
	7	-.04725	.02137	.391	-.1319	.0374
	8	-.01330	.02137	.994	-.0980	.0714
4.5	3.5	-.15685*	.02137	.002	-.2415	-.0722
	4	.00130	.02137	1.000	-.0834	.0860
	5	-.04065	.02137	.533	-.1253	.0440
	6	-.04740	.02137	.388	-.1321	.0373
	7	-.04595	.02137	.417	-.1306	.0387
	8	-.01200	.02137	.996	-.0967	.0727

5	3.5	-.11620*	.02137	.010	-.2009	-.0315
	4	.04195	.02137	.503	-.0427	.1266
	4.5	.04065	.02137	.533	-.0440	.1253
	6	-.00675	.02137	1.000	-.0914	.0779
	7	-.00530	.02137	1.000	-.0900	.0794
	8	.02865	.02137	.816	-.0560	.1133
6	3.5	-.10945*	.02137	.014	-.1941	-.0248
	4	.04870	.02137	.363	-.0360	.1334
	4.5	.04740	.02137	.388	-.0373	.1321
	5	.00675	.02137	1.000	-.0779	.0914
	7	.00145	.02137	1.000	-.0832	.0861
	8	.03540	.02137	.659	-.0493	.1201
7	3.5	-.11090*	.02137	.013	-.1956	-.0262
	4	.04725	.02137	.391	-.0374	.1319
	4.5	.04595	.02137	.417	-.0387	.1306
	5	.00530	.02137	1.000	-.0794	.0900
	6	-.00145	.02137	1.000	-.0861	.0832
	8	.03395	.02137	.694	-.0507	.1186
8	3.5	-.14485*	.02137	.003	-.2295	-.0602
	4	.01330	.02137	.994	-.0714	.0980
	4.5	.01200	.02137	.996	-.0727	.0967
	5	-.02865	.02137	.816	-.1133	.0560
	6	-.03540	.02137	.659	-.1201	.0493
	7	-.03395	.02137	.694	-.1186	.0507

*. The mean difference is significant at the 0.05 level.

Table 20 One-way ANOVA analysis of (a) molar signal coefficient at first type site (ΔE_1) and (b) molar signal coefficient at second type site (ΔE_2) obtained from binding isotherms of daptomycin and PAMAM dendrimer generation 6 at various pH values

a)

ANOVA					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8838.481	5	1767.696	1.952	.159
Within Groups	10866.856	12	905.571		
Total	19705.337	17			

b)

ANOVA					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.000	1	.000	.100	.768
Within Groups	.003	4	.001		
Total	.003	5			

Table 21 One-way ANOVA analysis of (a) dissociation constant at first type site (K_{d1}) and (b) dissociation constant at second type site (K_{d2}) obtained from binding isotherms of daptomycin and PAMAM dendrimer generation 6 at various pH values

a)

ANOVA					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.100	5	.020	16.143	.000
Within Groups	.015	12	.001		
Total	.115	17			

b)

ANOVA					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.581	1	1.581	2.790	.170
Within Groups	2.267	4	.567		
Total	3.848	5			

Table 22 One-way ANOVA analysis of dissociation constants (K_d) obtained from binding isotherms of daptomycin and PAMAM dendrimer generation 6 at various pH values

Multiple Comparisons						
(I) pH	(J) pH	Mean Difference (I- J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
3.5	4	.11010*	.02878	.023	.0134	.2068
	4.5	.15223*	.02878	.002	.0556	.2489
	5	.15200*	.02878	.002	.0553	.2487
	6	.22080*	.02878	.000	.1241	.3175
	7	.21833*	.02878	.000	.1217	.3150
4	3.5	-.11010*	.02878	.023	-.2068	-.0134
	4.5	.04213	.02878	.691	-.0545	.1388
	5	.04190	.02878	.696	-.0548	.1386
	6	.11070*	.02878	.022	.0140	.2074
	7	.10823*	.02878	.025	.0116	.2049
4.5	3.5	-.15223*	.02878	.002	-.2489	-.0556
	4	-.04213	.02878	.691	-.1388	.0545
	5	-.00023	.02878	1.000	-.0969	.0964
	6	.06857	.02878	.236	-.0281	.1652
	7	.06610	.02878	.267	-.0306	.1628
5	3.5	-.15200*	.02878	.002	-.2487	-.0553
	4	-.04190	.02878	.696	-.1386	.0548
	4.5	.00023	.02878	1.000	-.0964	.0969
	6	.06880	.02878	.233	-.0279	.1655
	7	.06633	.02878	.264	-.0303	.1630
6	3.5	-.22080*	.02878	.000	-.3175	-.1241
	4	-.11070*	.02878	.022	-.2074	-.0140
	4.5	-.06857	.02878	.236	-.1652	.0281
	5	-.06880	.02878	.233	-.1655	.0279
	7	-.00247	.02878	1.000	-.0991	.0942
7	3.5	-.21833*	.02878	.000	-.3150	-.1217
	4	-.10823*	.02878	.025	-.2049	-.0116

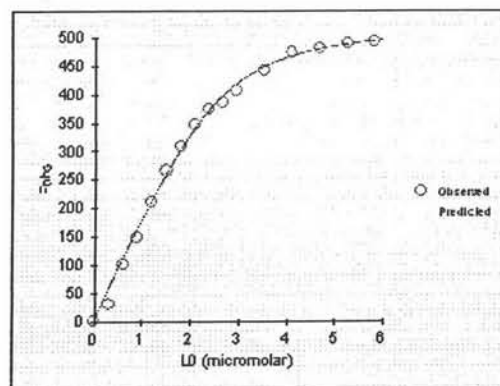
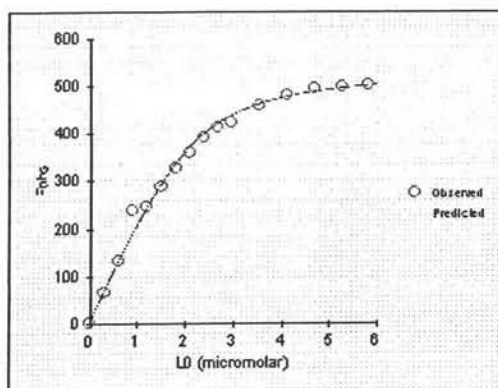
4.5	-.06610	.02878	.267	-.1628	.0306
5	-.06633	.02878	.264	-.1630	.0303
6	.00247	.02878	1.000	-.0942	.0991

*. The mean difference is significant at the 0.05 level.

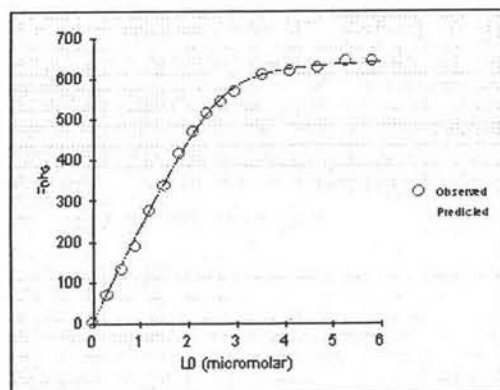
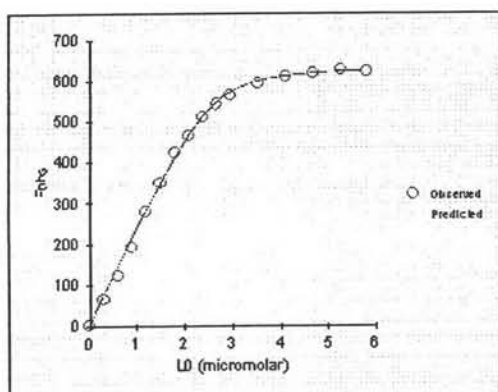
APPENDIX C

FTTTING CURVES

a



b



c

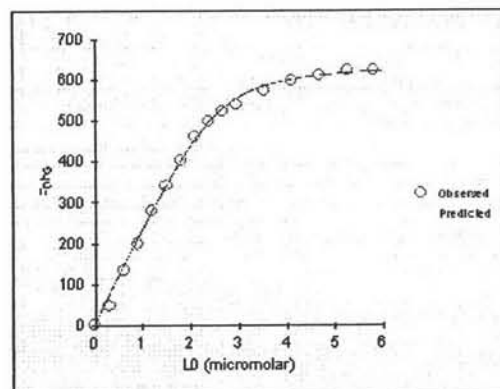
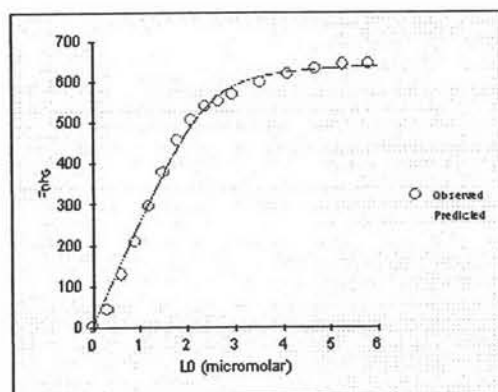
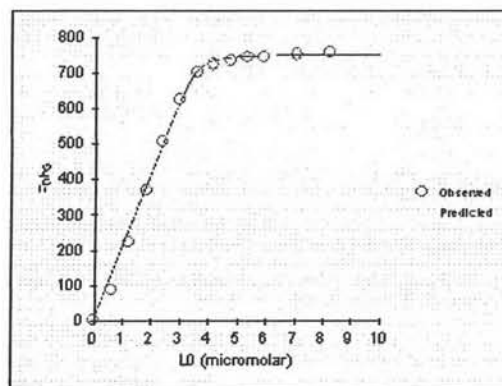
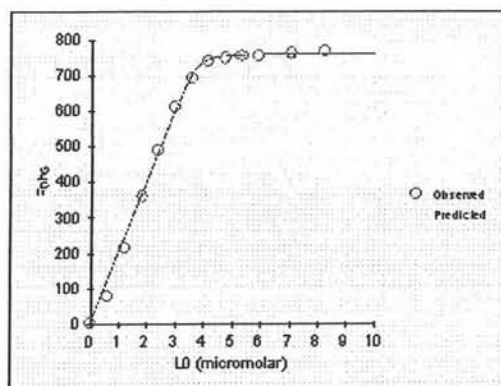
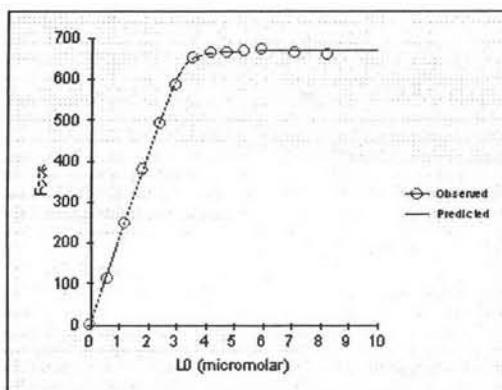
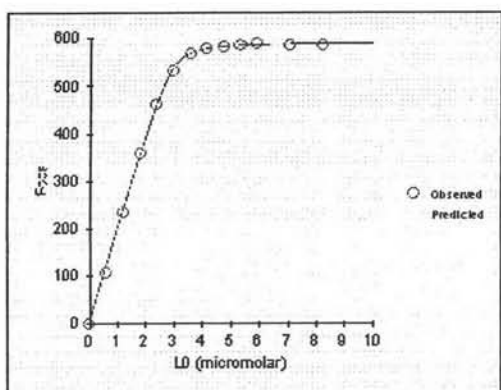


Figure 45 Nonlinear regression analysis of the binding isotherm obtained from the titration of PAMAM generation 5 with daptomycin at pH 3.5 (a), 4 (b) and 4.5 (c) using WinNonlin with initial parameters; $\Delta E = 200$ to 250, $K_d = 0.01$ to 0.5 and $R = 2$ to 3

d



e



f

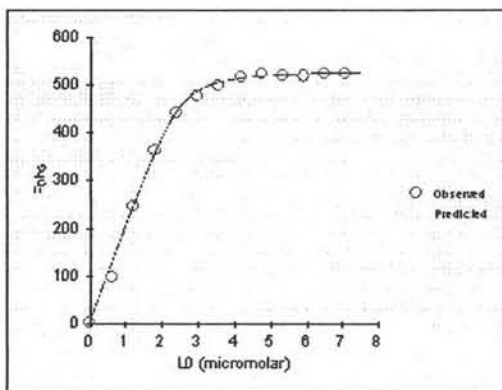
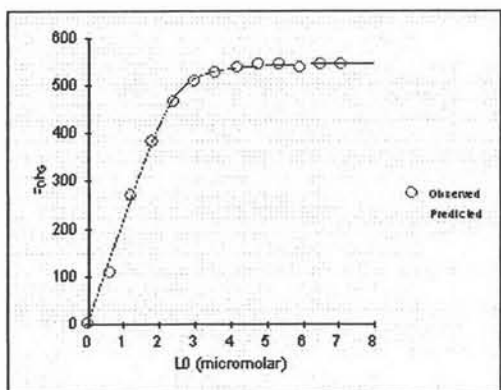


Figure 46 Nonlinear regression analysis of the binding isotherm obtained from the titration of PAMAM generation 5 with daptomycin at pH 5 (d), 6 (e) and 7 (f) using WinNonlin with initial parameters; $\Delta E = 200$ to 250, $K_d = 0.01$ to 0.5 and $R = 2$ to 3

09

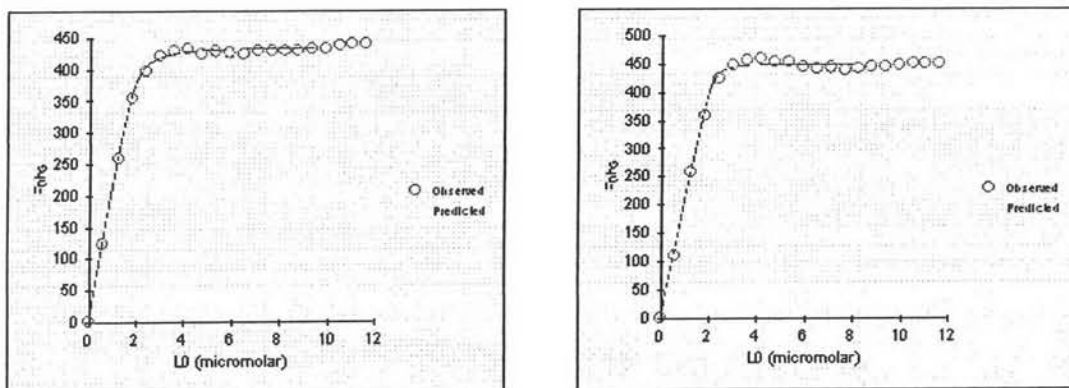
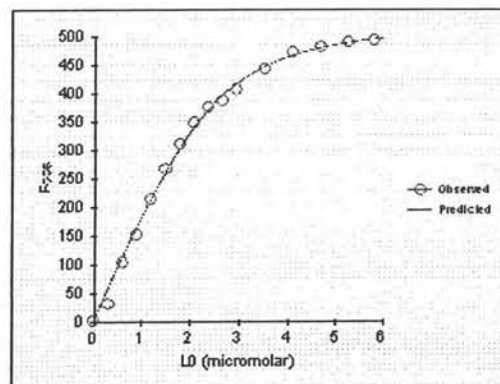
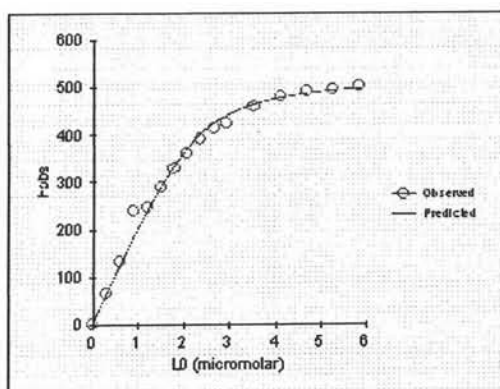
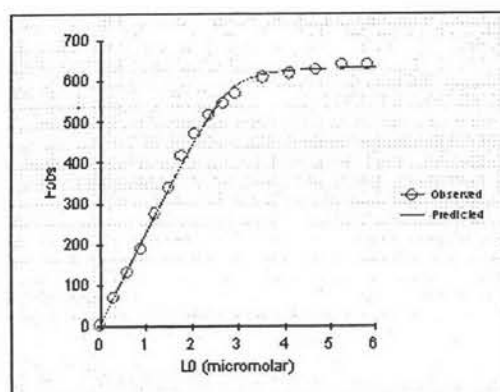
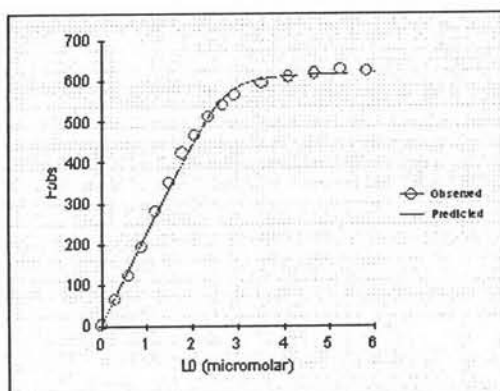


Figure 47 Nonlinear regression analysis of the binding isotherm obtained from the titration of PAMAM generation 5 with daptomycin at pH 8 (g) using WinNonlin with initial parameters; $\Delta E = 200$ to 250, $K_d = 0.01$ to 0.5 and $R = 2$ to 3

a



b



c

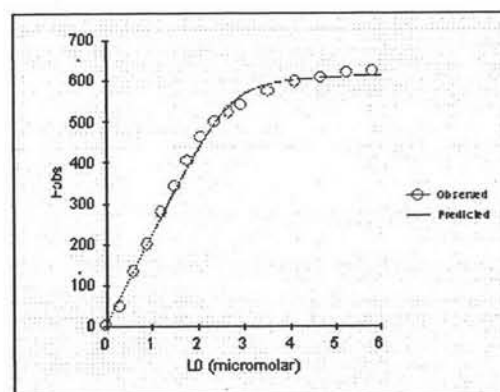
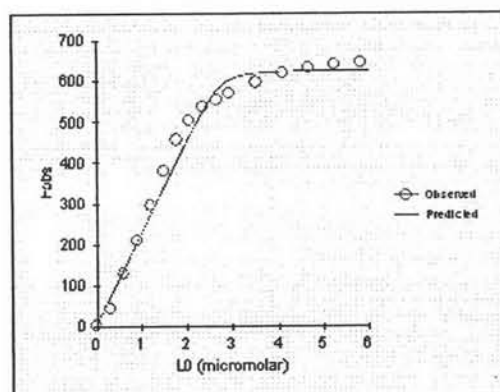
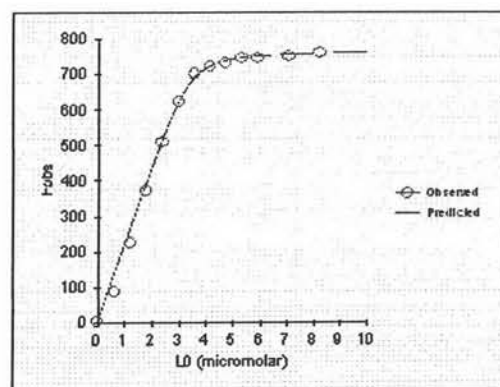
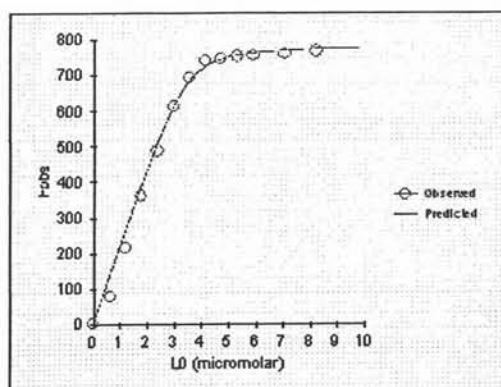
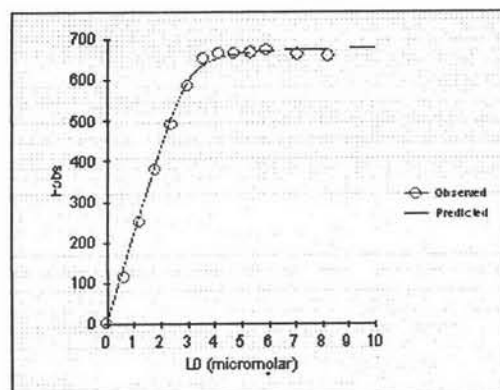
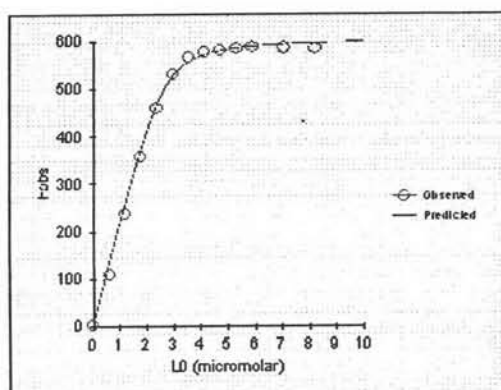


Figure 48 Nonlinear regression analysis of the binding isotherm obtained from the titration of PAMAM generation 5 with daptomycin at pH 3.5 (a), 4 (b) and 4.5 (c) with fixed ΔE to 225.79 using WinNonlin with initial parameters; $K_d = 0.01$ to 0.5 and $R = 2$ to

d



e



f

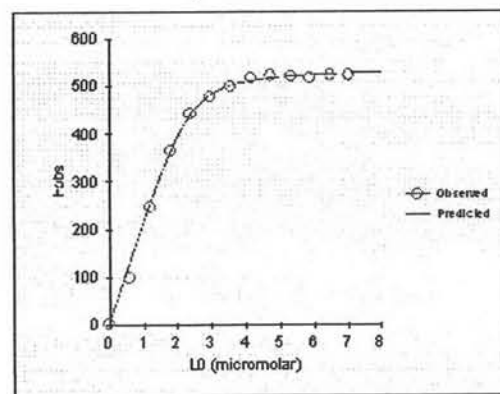
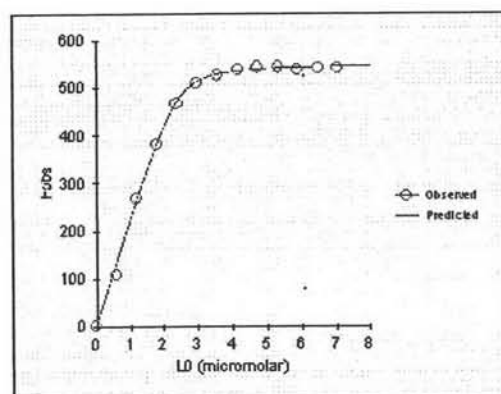


Figure 49 Nonlinear regression analysis of the binding isotherm obtained from the titration of PAMAM generation 5 with daptomycin at pH 5 (d), 6 (e) and 7 (f) with fixed ΔE to 225.79 using WinNonlin with initial parameters; $K_d = 0.01$ to 0.5 and $R = 2$ to 3

g

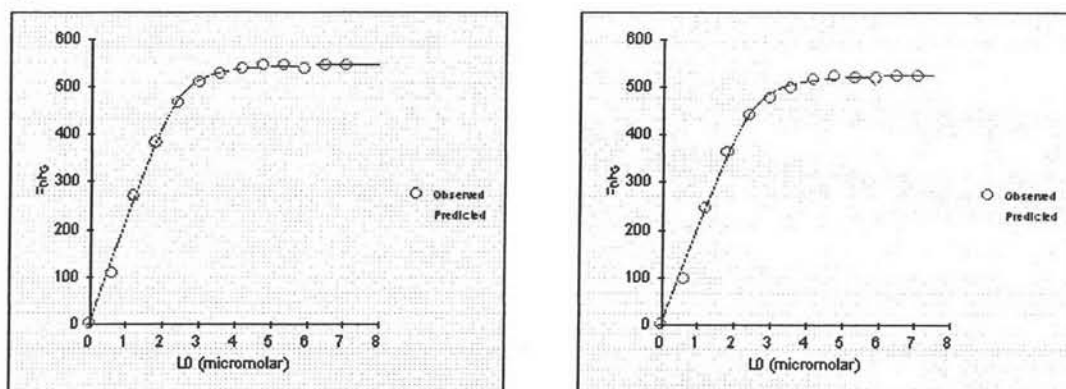
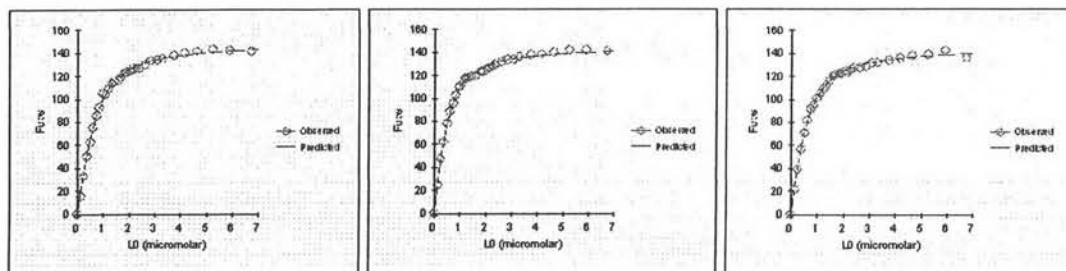
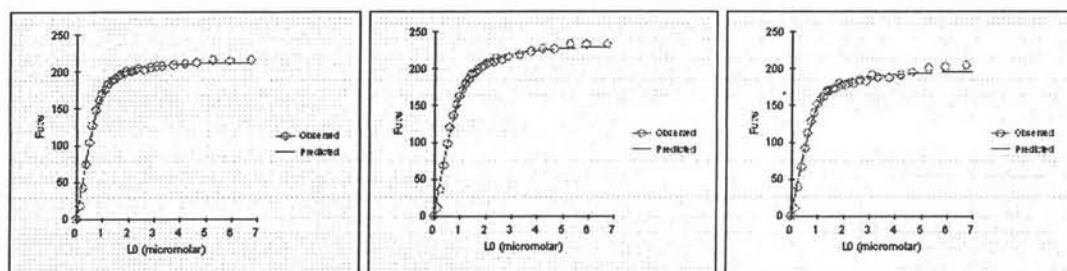


Figure 50 Nonlinear regression analysis of the binding isotherm obtained from the titration of PAMAM generation 5 with daptomycin at pH 8 (g) with fixed ΔE to 225.79 using WinNonlin with initial parameters; $K_d = 0.01$ to 0.5 and $R = 2$ to 3

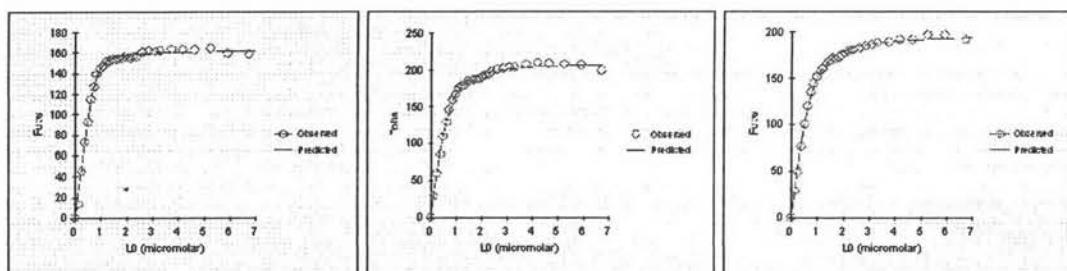
a



b



c



d

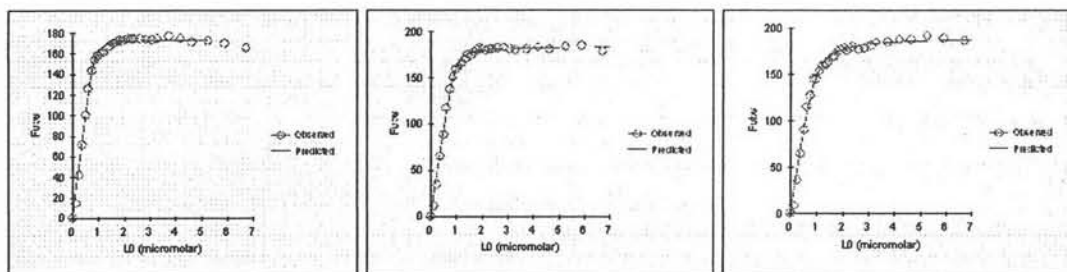
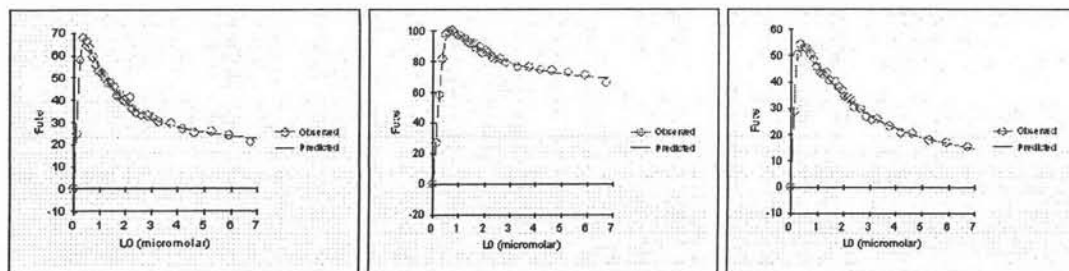


Table 51 Nonlinear regression analysis of the binding isotherm obtained from the titration of PAMAM generation 6 with daptomycin at pH 3.5 (a), 4 (b), 4.5 (c) and 5 (d) using WinNonlin with initial parameters; $\Delta E_1 = 100$ to 300, $\Delta E_2 = -50$ to 0, $K_1 = 0$ to 1, $K_2 = 0$ to 3, $R_1 = 0$ to 5 and $R_2 = 0$ to 5

e



f

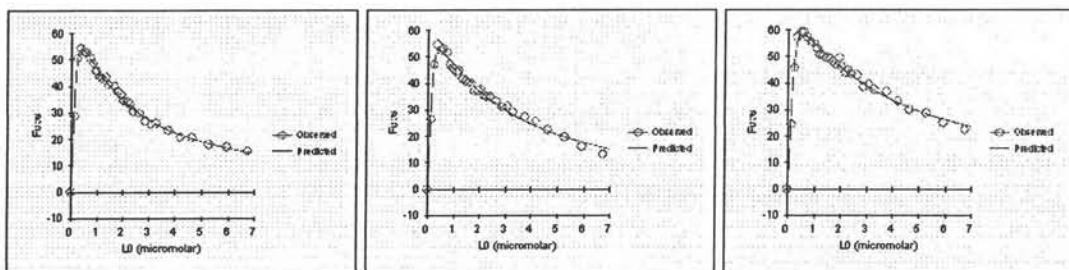
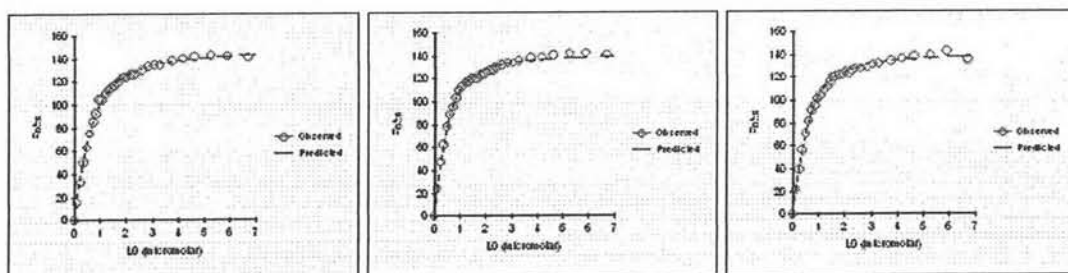
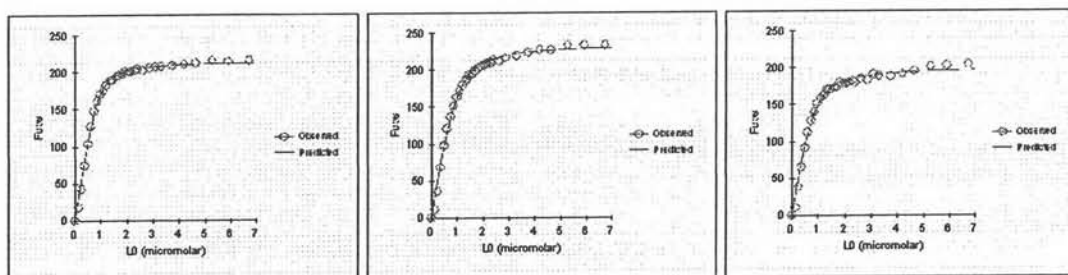


Table 52 Nonlinear regression analysis of the binding isotherm obtained from the titration of PAMAM generation 6 with daptomycin at pH 6 (e) and 7 (f) using WinNonlin with initial parameters; $\Delta E_1 = 100$ to 300, $\Delta E_2 = -50$ to 0, $K_1 = 0$ to 1, $K_2 = 0$ to 3, $R_1 = 0$ to 5 and $R_2 = 0$ to 5

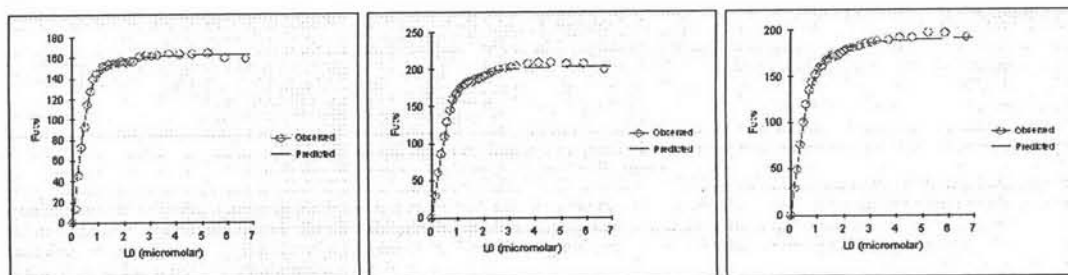
a



b



c



d

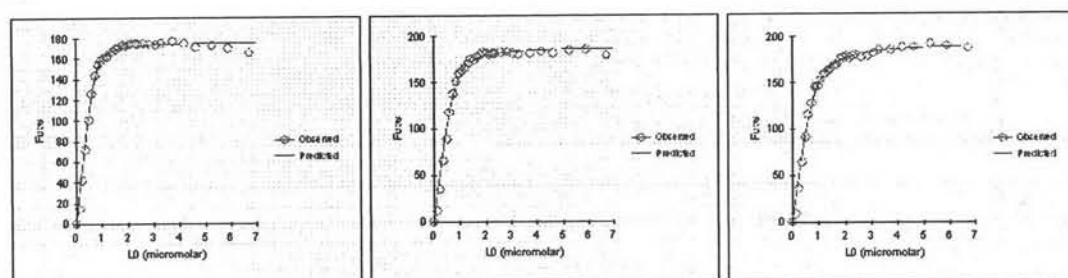
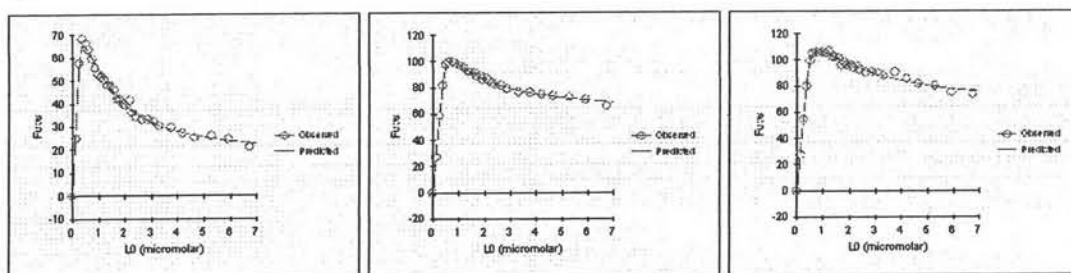


Table 53 Nonlinear regression analysis of the binding isotherm obtained from the titration of PAMAM generation 6 with daptomycin at pH 3.5 (a), 4 (b), 4.5 (c) and 5 (d) with fixed ΔE_1 to 251.08 and ΔE_2 to -49.97 using WinNonlin with initial parameters; $K_1 = 0$ to 1, $K_2 = 0$ to 3, $R_1 = 0$ to 5 and $R_2 = 0$ to 5

e



f

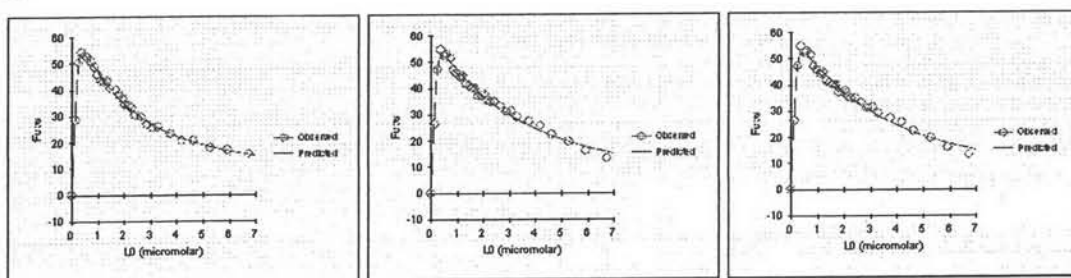
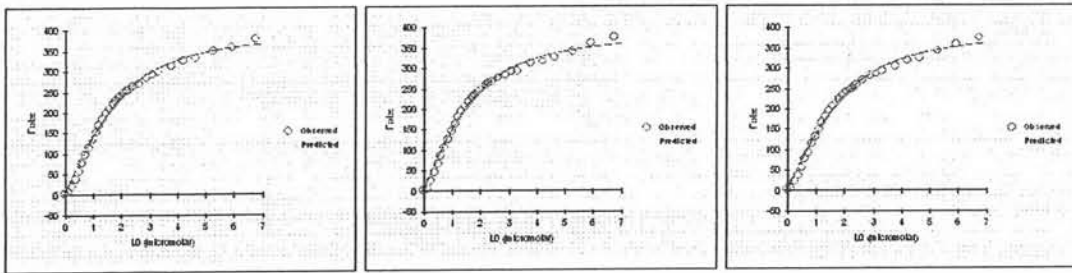


Table 54 Nonlinear regression analysis of the binding isotherm obtained from the titration of PAMAM generation 6 with daptomycin at pH 6 (e) and 7 (f) fixed ΔE_1 to 251.08 and ΔE_2 to -49.97 using WinNonlin with initial parameters; $K_1 = 0$ to 1, $K_2 = 0$ to 3, $R_1 = 0$ to 5 and $R_2 = 0$ to 5

pH 4



pH 7

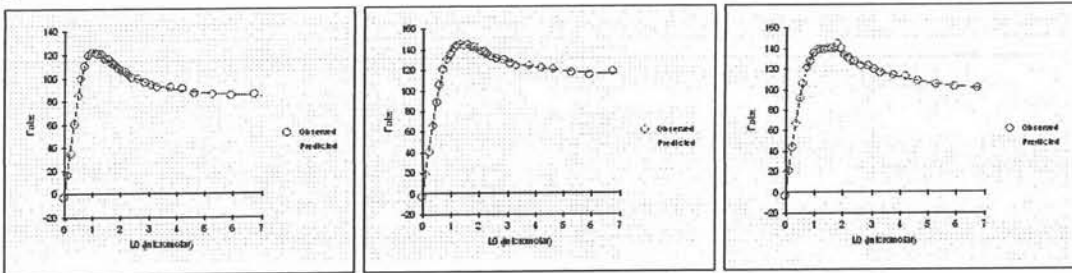


Table 55 Nonlinear regression analysis of the binding isotherm obtained from the titration of PAMAM generation 3 with daptomycin at pH 4 and 7 using WinNonlin with initial parameters; $\Delta E_1 = 100$ to 300, $\Delta E_2 = -50$ to 0, $K_1 = 0$ to 1, $K_2 = 0$ to 3, $R_1 = 0$ to 5 and $R_2 = 0$ to 5

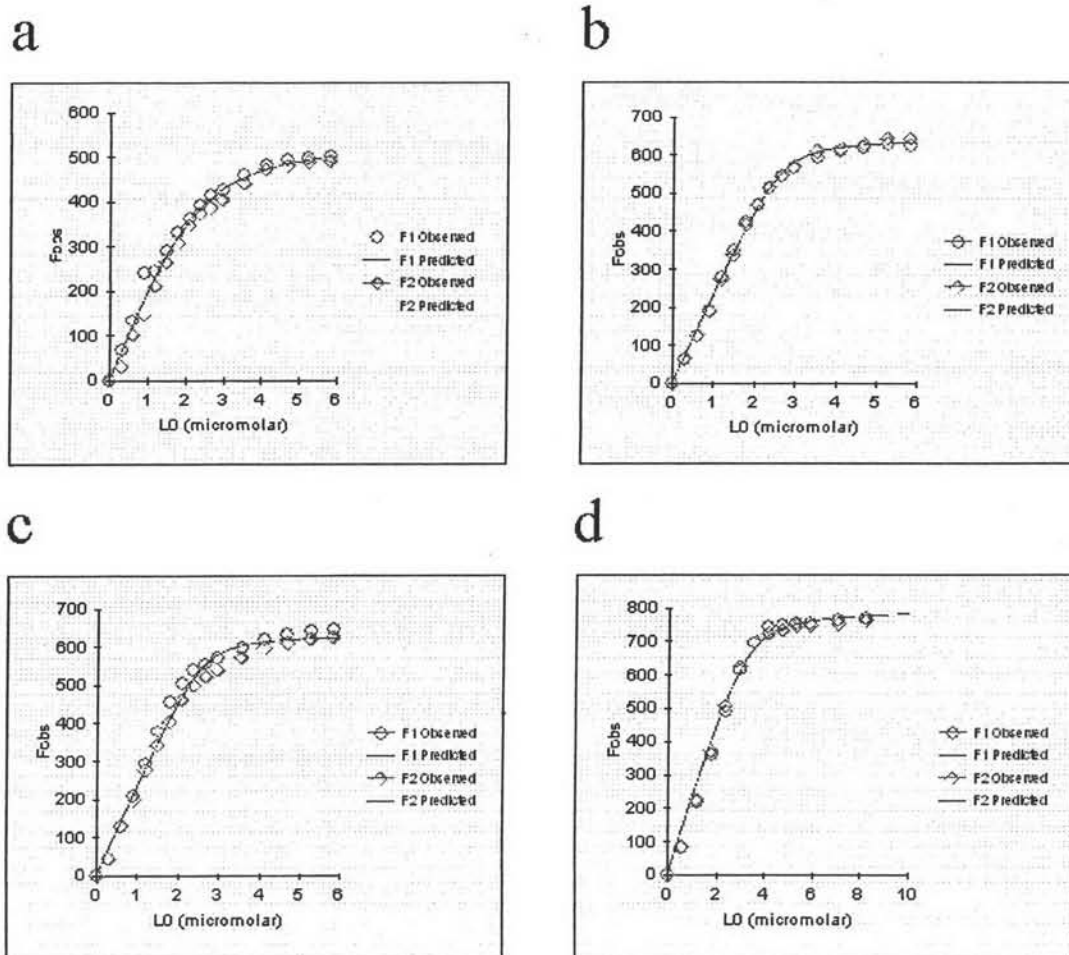
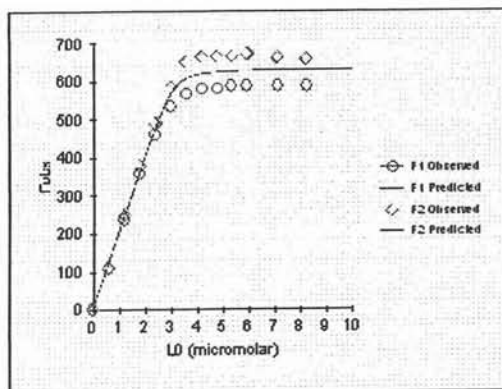
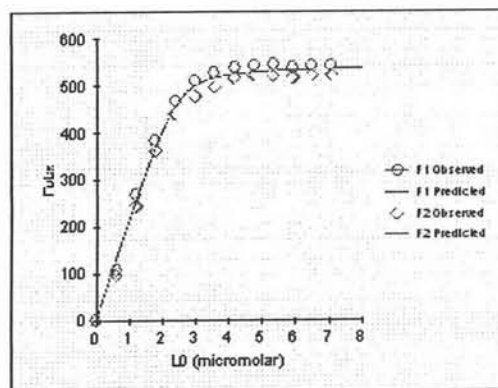


Figure 56 Simultaneous nonlinear regression analysis of the binding isotherm obtained from the titration of PAMAM generation 5 with daptomycin at pH 3.5 (a), 4 (b), 4.5 (c) and 5 (d) using WinNonlin with initial parameters; $\Delta E = 100$ to 300, $K = 0.01$ to 0.5 and $R = 2$ to 3

e



f



g

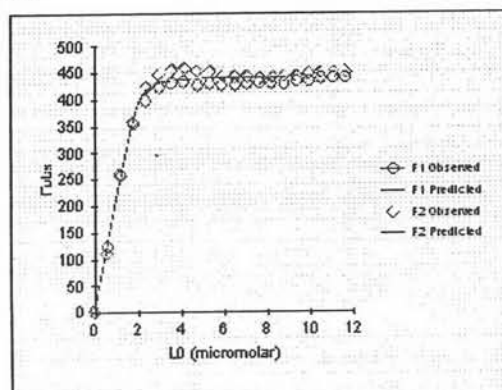


Figure 57 Simultaneous nonlinear regression analysis of the binding isotherm obtained from the titration of PAMAM generation 5 with daptomycin at pH 6 (e), 7 (f) and 8 (g) using WinNonlin with initial parameters; $\Delta E = 100$ to 300, $K = 0.01$ to 0.5 and $R = 2$ to 3

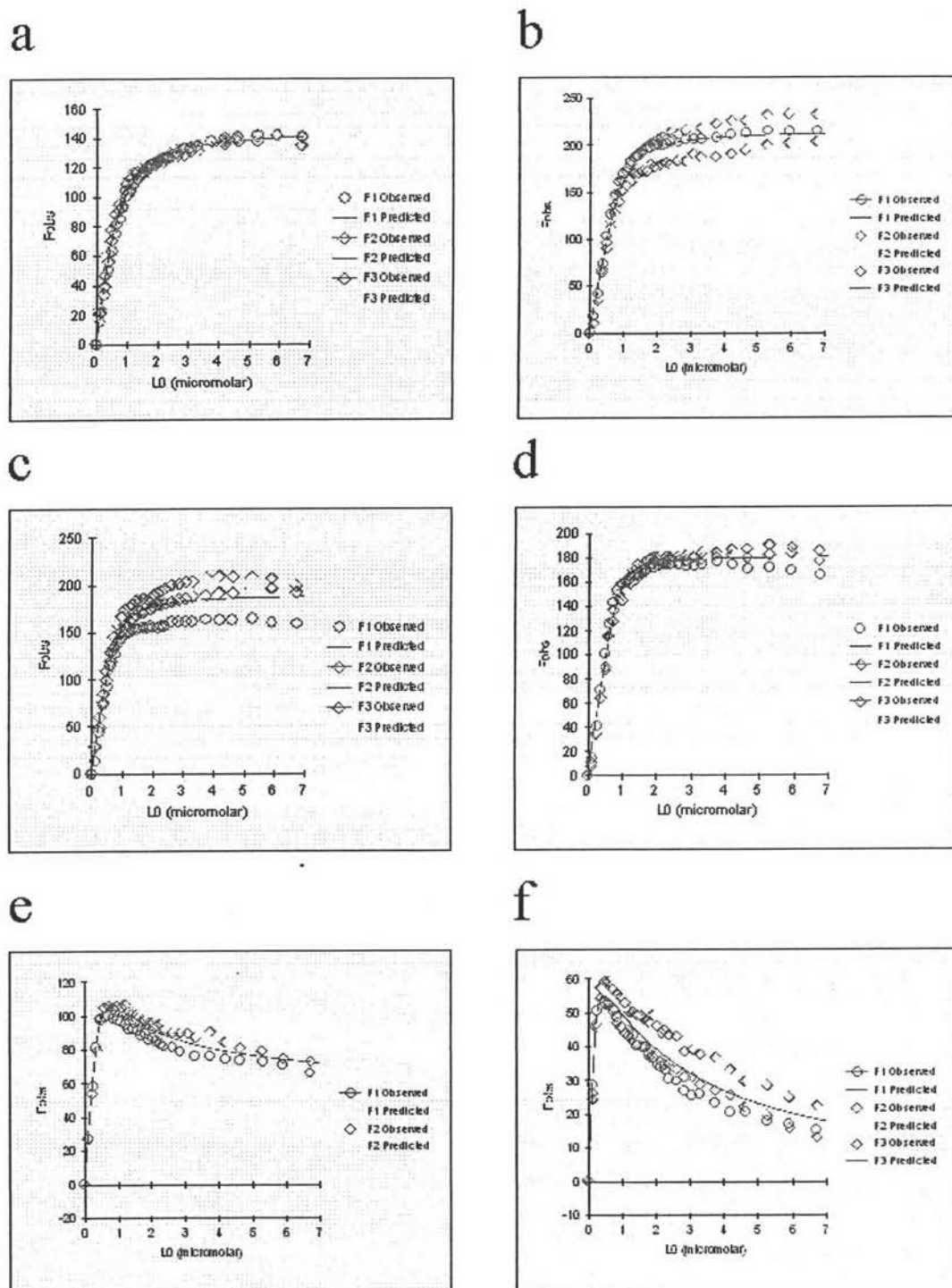
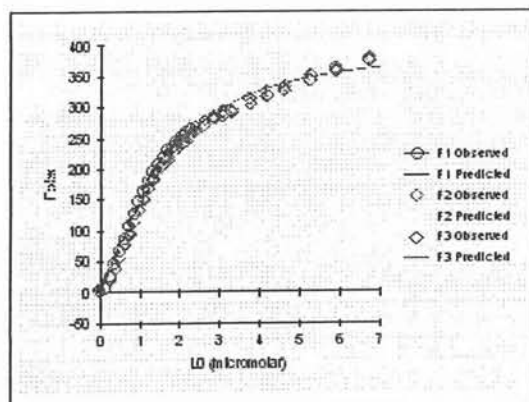


Figure 58 Simultaneous nonlinear regression analysis of the binding isotherm obtained from the titration of PAMAM generation 6 with daptomycin at pH 3.5 (a), 4 (b), 4.5 (c), 5 (d), 6 (e) and 7 (f) using WinNonlin with initial parameters; $\Delta E_1 = 100$ to 300, $\Delta E_2 = -50$ to 0, $K_{d1} = 0$ to 1, $K_{d2} = 0$ to 3, $R_1 = 0$ to 5 and $R_2 = 0$ to 5

pH 4



pH 7

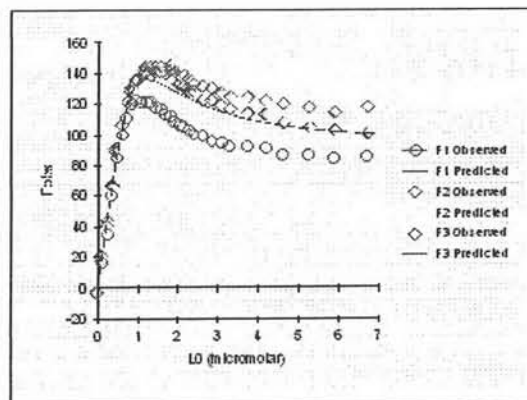
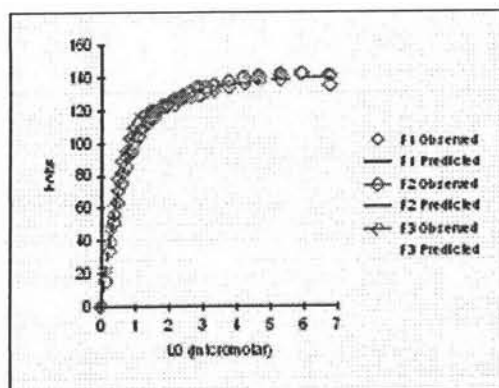
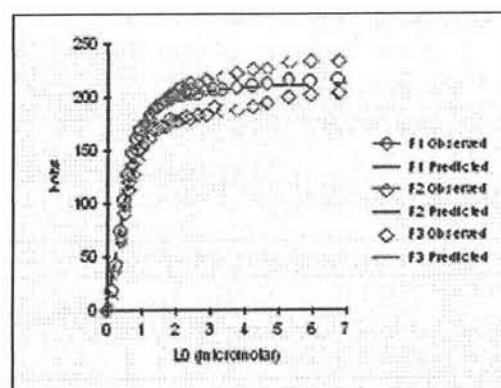


Figure 59 Simultaneous nonlinear regression analysis of the binding isotherm obtained from the titration of PAMAM generation 3 with daptomycin at pH 4 and 7 using WinNonlin with initial parameters; $\Delta E_1 = 100$ to 300, $\Delta E_2 = -50$ to 0, $K_{d1} = 0$ to 1, $K_{d2} = 0$ to 3, $R_1 = 0$ to 5 and $R_2 = 0$ to 5

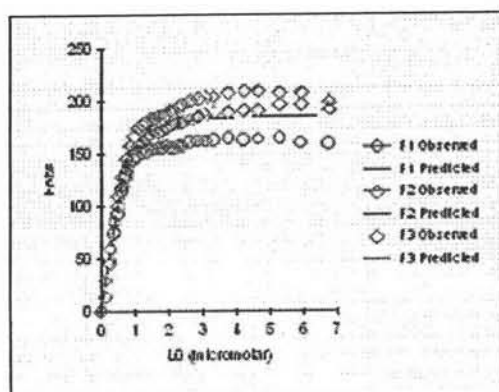
a



b



c



d

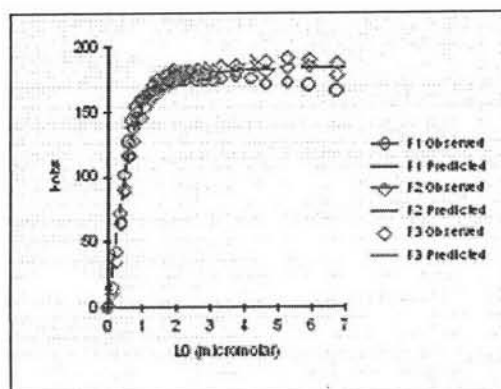
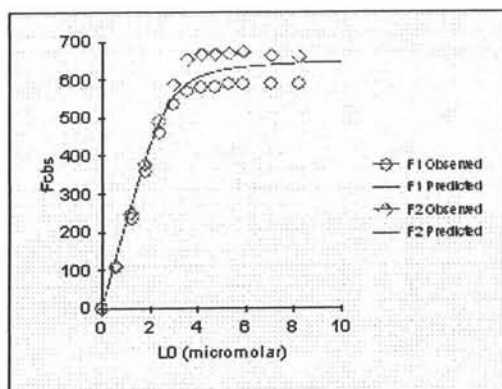
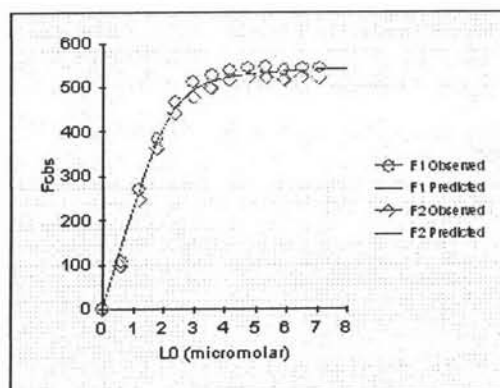


Figure 60 Simultaneous nonlinear regression analysis of the binding isotherm obtained from the titration of PAMAM generation 5 with daptomycin at pH 3.5 (a), 4 (b), 4.5 (c) and 5 (d) with fixed ΔE to 240.13 using WinNonlin with initial parameters; $K = 0.01$ to 0.5 and $R = 2$ to 3

e



f



g

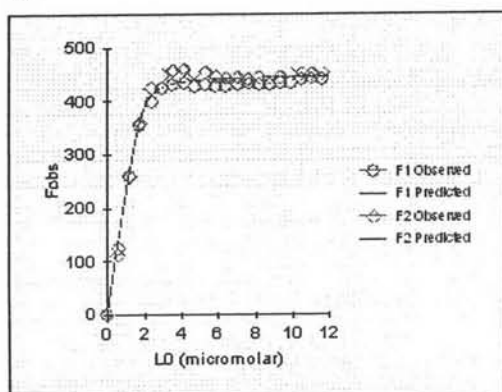


Figure 61 Simultaneous nonlinear regression analysis of the binding isotherm obtained from the titration of PAMAM generation 5 with daptomycin at pH 6 (e), 7 (f) and 8 (g) with fixed ΔE to 240.13 using WinNonlin with initial parameters; $K = 0.01$ to 0.5 and $R = 2$ to 3

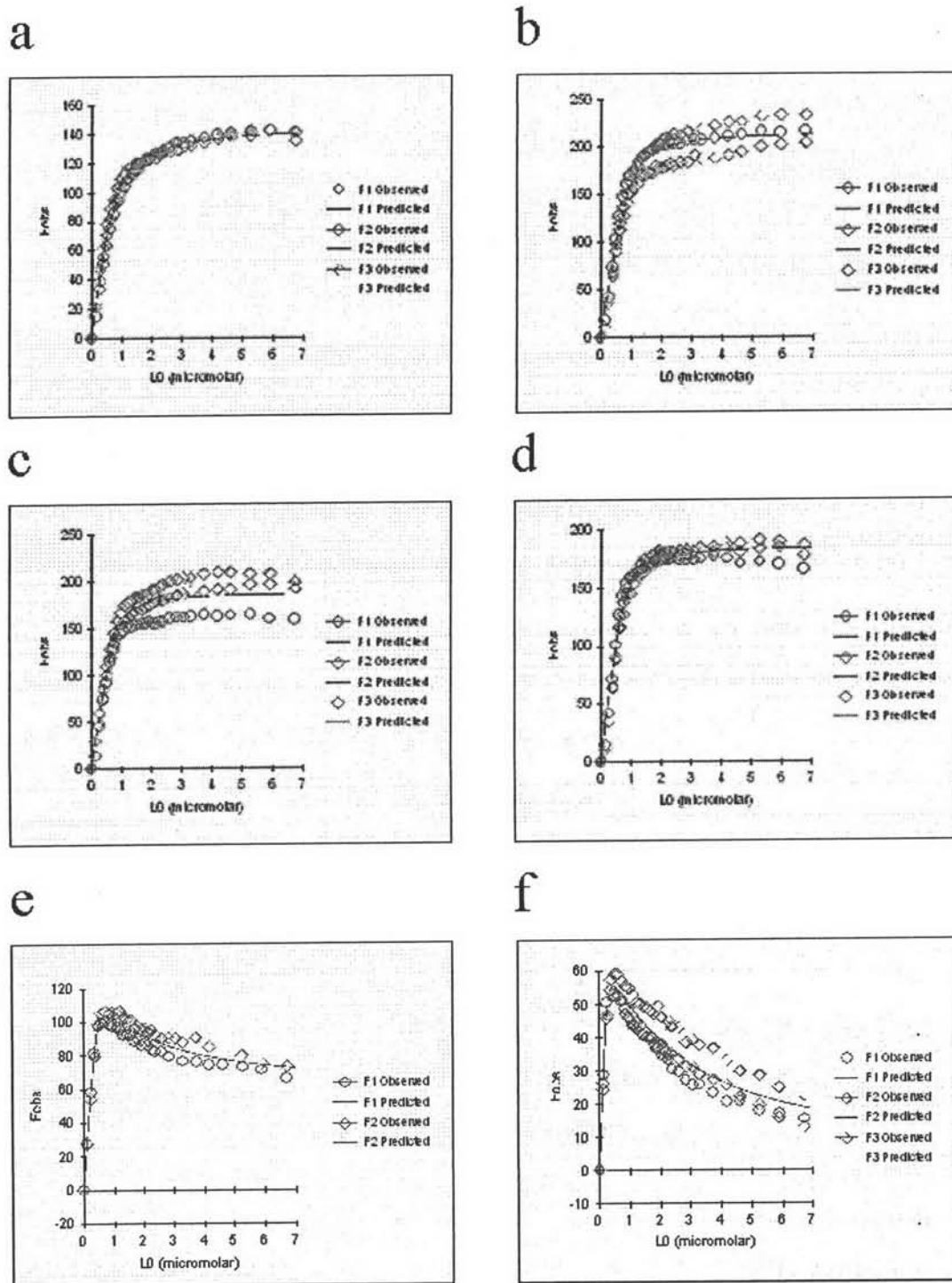
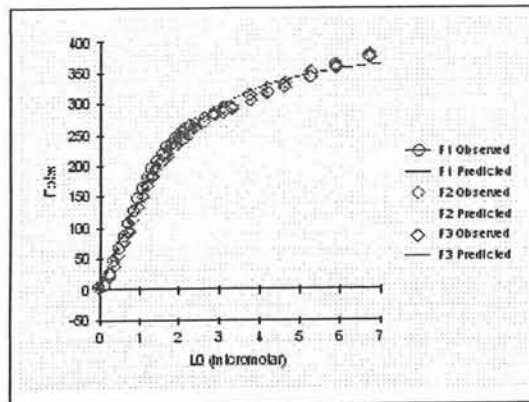


Figure 62 Simultaneous nonlinear regression analysis of the binding isotherm obtained from the titration of PAMAM generation 6 with daptomycin at pH 3.5 (a), 4 (b), 4.5 (c), 5 (d), 6 (e) and 7 (f) with fixed ΔE_1 and ΔE_2 to 240.13 and -46.65, respectively using WinNonlin with initial parameters; $K_{d1} = 0$ to 1, $K_{d2} = 0$ to 3, $R_1 = 0$ to 5 and $R_2 = 0$ to 5

pH 4



pH 7

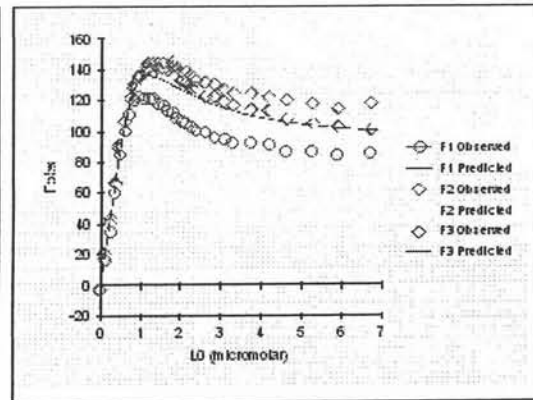


Figure 63 Simultaneous nonlinear regression analysis of the binding isotherm obtained from the titration of PAMAM generation 3 with daptomycin at pH 4 and 7 with fixed ΔE_1 and ΔE_2 to 240.13 and -46.65, respectively using WinNonlin with initial parameters; $K_{d1} = 0$ to 1, $K_{d2} = 0$ to 3, $R_1 = 0$ to 5 and $R_2 = 0$ to 5

APPENDIX D

FLUORECENCE TITRATION DATA

Table 23 Fluorescence intensity obtained from the titration of PAMAM dendrimer generation 5 to daptomycin solution at pH 3 (replication = 2)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity			
		I		II	
		at 355 nm	at 460nm	at 355 nm	at 460nm
3.02	0.00	153.31	110.25	148.21	106.30
3.02	0.02	147.51	115.89	145.57	103.40
3.01	0.04	144.33	112.97	142.73	102.58
3.01	0.05	144.72	115.37	141.93	102.23
3.00	0.07	144.83	115.30	141.34	102.71
3.00	0.09	142.29	115.13	139.87	103.49
2.99	1.00	142.85	118.30	138.96	103.89
2.99	1.90	145.23	121.05	137.80	104.35
2.98	2.80	147.05	123.86	137.87	105.79
2.98	3.69	148.93	126.40	135.75	106.26
2.98	4.58	150.13	128.79	135.30	106.19

Table 24 Fluorescence intensity obtained from the titration of PAMAM dendrimer generation 5 to daptomycin solution at pH 4 (replication = 2)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity			
		I		II	
		at 355 nm	at 460nm	at 355 nm	at 460nm
3.02	0.00	115.02	77.88	140.99	112.94
3.02	0.02	38.57	419.30	48.19	477.78
3.01	0.04	19.47	561.77	18.44	646.68
3.01	0.05	16.31	590.93	24.24	659.65
3.00	0.07	16.14	619.22	15.25	664.77
3.00	0.09	16.29	634.04	14.52	668.25
2.99	0.11	17.22	648.47	16.05	677.20
2.99	0.13	18.58	657.43	16.41	676.78
2.98	0.14	18.87	665.53	17.61	675.80
2.98	0.16	20.61	662.06	19.04	668.31
2.98	0.18	22.60	651.91	21.46	664.47
2.97	1.08	69.25	503.65	73.28	497.53
2.97	1.97	95.89	437.15	97.82	427.25
2.96	2.86	109.05	401.46	109.87	393.16
2.96	3.75	116.80	382.92	118.12	378.91
2.95	4.64	120.99	373.13	121.92	366.82
2.95	5.52	123.66	363.00	123.83	363.75
2.94	6.40	124.10	358.24	124.26	357.23
2.94	7.28	123.44	352.23	123.80	351.81

Table 25 Fluorescence intensity obtained from the titration of PAMAM dendrimer generation 5 to daptomycin solution at pH 5 (replication = 2)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity			
		I		II	
		at 355 nm	at 460nm	at 355 nm	at 460nm
3.02	0.00	122.20	99.13	135.27	114.95
3.02	0.03	22.92	562.50	28.32	653.94
3.01	0.06	16.17	571.50	17.02	668.30
3.01	0.10	17.75	591.74	19.02	651.53
3.00	0.13	18.33	620.53	18.49	652.98
3.00	0.16	18.72	646.95	19.27	656.08
2.99	0.19	22.50	648.14	22.58	651.22
2.99	0.22	23.70	648.65	26.93	646.77
2.98	0.25	26.29	643.33	27.88	637.85
2.98	0.28	29.57	637.71	31.46	630.75
2.98	0.31	33.21	628.80	34.66	619.16
2.97	0.40	42.49	600.95	44.30	593.29
2.97	0.49	49.39	578.93	52.56	568.13
2.96	0.58	58.06	559.31	61.13	547.63
2.96	0.67	63.98	541.93	66.17	530.63
2.95	0.76	69.36	525.42	73.61	512.51
2.95	1.96	103.84	457.50	105.69	443.74
2.94	2.84	119.60	421.94	120.27	413.51
2.94	3.73	124.98	408.97	126.09	402.82
2.93	4.61	129.28	395.88	129.15	396.18
2.93	5.48	131.40	391.52	132.61	387.40

Table 26 Fluorescence intensity obtained from the titration of PAMAM dendrimer generation 5 to daptomycin solution at pH 6 (replication = 2)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity			
		I		II	
		at 355 nm	at 460nm	at 355 nm	at 460nm
2.99	0.00	117.47	107.88	117.96	108.45
2.98	0.01	68.70	242.39	69.65	252.53
2.98	0.02	44.94	372.48	47.92	371.56
2.97	0.04	31.57	476.04	31.10	483.70
2.97	0.05	21.35	551.45	21.65	560.50
2.96	0.06	19.68	584.76	18.70	597.03
2.96	0.07	19.62	608.61	18.60	623.58
2.95	0.08	19.77	636.11	19.65	642.34
2.95	0.10	20.58	649.39	20.36	661.61
2.94	0.11	21.80	662.03	20.38	670.55
2.94	0.12	23.56	669.88	21.05	674.58
2.93	0.13	23.22	666.90	21.78	683.44
2.93	0.14	23.70	669.45	22.51	680.70
2.92	0.16	24.41	670.04	23.65	679.98
2.92	0.17	25.54	666.41	23.84	679.92
2.91	0.29	34.58	632.79	34.89	641.15
2.91	0.40	47.57	589.53	45.12	601.86
2.91	0.52	60.02	556.13	56.27	570.46
2.90	0.64	69.34	530.36	67.55	538.57
2.90	0.76	76.95	511.35	76.85	516.58
2.89	0.87	84.70	494.39	85.52	496.96
2.88	0.99	96.61	464.48	94.50	474.24
2.87	1.10	104.70	447.00	103.48	450.48
2.86	1.21	113.78	432.19	111.90	436.53
2.85	1.33	117.83	423.83	117.25	427.07

Table 27 Fluorescence intensity obtained from the titration of PAMAM dendrimer generation 5 to daptomycin solution at pH 7 (replication = 2)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity			
		I		II	
		at 355 nm	at 460nm	at 355 nm	at 460nm
2.99	0.00	125.74	115.26	129.86	120.15
2.98	0.02	89.87	275.48	85.94	283.00
2.98	0.04	65.50	428.26	61.05	436.18
2.97	0.05	48.06	563.08	43.83	565.56
2.97	0.07	39.17	644.94	35.78	636.23
2.96	0.09	37.60	678.95	37.27	668.80
2.96	0.11	38.47	704.07	37.30	689.42
2.95	0.13	39.32	714.87	38.20	693.41
2.95	0.14	39.61	715.50	37.78	694.93
2.94	0.16	39.64	714.98	39.08	694.89
2.94	0.18	41.37	706.16	40.01	685.23
2.93	0.20	42.52	701.84	41.81	679.93
2.93	0.22	45.07	689.80	43.57	673.03
2.92	0.33	60.87	645.07	59.27	627.06
2.92	0.45	73.74	601.32	72.75	592.53
2.91	0.57	87.65	571.09	86.04	562.51
2.91	0.69	96.03	549.43	95.94	537.49
2.91	0.81	105.23	529.44	104.89	517.96
2.90	0.92	113.78	516.30	112.88	504.62
2.90	1.04	121.67	501.78	119.40	492.76
2.89	1.16	126.15	490.96	124.46	482.13
2.88	1.27	132.65	473.32	130.92	466.95
2.87	1.38	139.78	462.33	138.16	453.80
2.86	1.49	145.17	452.85	141.51	443.88
2.85	1.61	147.73	444.37	144.26	434.92
2.85	1.72	150.29	437.76	149.24	428.86

Table 28 Fluorescence intensity obtained from the titration of PAMAM dendrimer generation 5 to daptomycin solution at pH 8 (replication = 2)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity			
		I		II	
		at 355 nm	at 460nm	at 355 nm	at 460nm
2.99	0.00	120.50	111.62	124.93	118.10
2.98	0.02	91.00	228.62	86.00	230.72
2.98	0.04	73.79	331.33	65.91	342.62
2.97	0.05	60.00	416.42	53.63	434.20
2.97	0.07	51.83	472.01	45.36	498.54
2.96	0.09	45.01	516.44	40.93	541.63
2.96	0.11	44.04	543.99	36.27	571.33
2.95	0.13	44.59	564.44	37.14	590.83
2.95	0.14	43.60	578.80	40.89	599.01
2.94	0.16	43.30	580.07	40.77	601.10
2.94	0.18	43.88	575.84	42.60	597.49
2.93	0.20	46.20	571.97	43.80	588.22
2.93	0.22	48.16	568.84	46.81	581.80
2.92	0.33	53.74	530.96	63.77	535.44
2.92	0.45	79.10	498.32	78.79	502.40
2.91	0.57	91.77	470.83	90.44	478.32
2.91	0.69	100.84	451.60	100.29	460.77
2.91	0.81	108.55	437.12	108.67	444.61
2.90	0.92	115.08	431.67	115.32	434.50
2.90	1.04	121.21	423.70	120.25	427.68
2.89	1.16	126.37	417.48	125.65	419.70
2.88	1.27	131.16	406.47	130.71	409.02
2.87	1.38	136.21	400.37	137.16	406.45
2.86	1.49	142.45	393.95	138.93	399.14
2.85	1.61	143.46	391.30	141.78	398.50
2.85	1.72	155.20	386.36	151.48	393.89

Table 29 Fluorescence intensity obtained from the titration of daptomycin to PAMAM dendrimer generation 5 solution at pH 3 (replication = 2)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity			
		I		II	
		at 355 nm	at 460 nm	at 355 nm	at 460 nm
0.00	0.27	11.86	9.74	11.09	9.39
0.60	0.27	65.12	33.66	53.01	33.40
1.20	0.27	103.13	79.15	102.96	78.75
1.79	0.27	129.69	121.70	127.58	140.32
2.38	0.27	147.28	175.76	143.92	206.50
2.98	0.27	165.12	244.74	157.58	280.27
3.56	0.27	180.01	310.53	174.73	348.89
4.15	0.27	195.84	367.53	191.15	416.56
4.74	0.27	209.85	421.95	204.14	476.38
5.32	0.27	222.81	473.22	225.26	535.24
5.90	0.27	240.24	519.22	241.46	575.97
7.06	0.27	282.85	612.95	289.46	665.91
8.21	0.27	326.88	681.11	340.09	737.00
9.35	0.27	376.85	750.17	393.16	801.60
10.49	0.27	425.68	803.30	434.65	853.46
11.61	0.27	473.70	847.41	491.12	901.97

Table 30 Fluorescence intensity obtained from the titration of daptomycin to double-distilled water at pH 3

[Dap] (μM)	[Den] (μM)	Fluorescence intensity	
		at 355 nm	at 460 nm
0.00	0.00	4.57	4.43
0.60	0.00	47.24	19.69
1.20	0.00	117.26	42.83
1.79	0.00	161.06	63.06
2.38	0.00	194.38	75.80
2.98	0.00	219.97	89.68
3.56	0.00	263.41	110.50
4.15	0.00	300.45	129.70
4.74	0.00	330.96	143.05
5.32	0.00	357.57	158.76
5.90	0.00	383.71	176.01
7.06	0.00	457.53	208.64
8.21	0.00	510.37	238.91
9.35	0.00	580.15	272.31
10.49	0.00	636.10	303.65
11.61	0.00	692.22	331.65

Table 31 Fluorescence intensity obtained from the titration of daptomycin to PAMAM dendrimer generation 5 solution at pH 3.5 (replication = 2)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity			
		I		II	
		at 355 nm	at 460 nm	at 355 nm	at 460 nm
0.00	0.05	8.41	12.04	7.42	11.54
0.30	0.05	12.46	86.09	10.75	50.81
0.60	0.05	14.21	163.59	13.95	132.48
0.89	0.05	17.36	280.62	16.29	188.91
1.19	0.05	22.34	294.09	24.66	259.51
1.49	0.05	27.13	342.87	24.85	318.27
1.78	0.05	32.23	388.93	29.92	367.65
2.07	0.05	38.08	428.13	37.53	413.80
2.37	0.05	42.21	464.69	42.48	448.15
2.66	0.05	49.08	492.11	47.20	464.59
2.95	0.04	55.27	512.54	53.58	492.33
3.52	0.04	70.73	567.28	70.56	547.23
4.10	0.04	87.31	601.72	87.52	593.39
4.67	0.04	102.69	631.40	103.05	618.31
5.24	0.04	114.15	650.21	118.77	641.43
5.80	0.04	129.84	672.04	134.30	661.97

Table 32 Fluorescence intensity obtained from the titration of daptomycin to double-distilled water at pH 3.5

[Dap] (μM)	[Den] (μM)	Fluorescence intensity	
		at 355 nm	at 460 nm
0.00	0.00	5.86	5.47
0.30	0.00	18.51	13.93
0.60	0.00	31.61	24.13
0.89	0.00	44.05	33.38
1.19	0.00	54.24	41.59
1.49	0.00	59.93	46.26
1.78	0.00	68.53	52.87
2.07	0.00	76.09	61.18
2.37	0.00	84.03	67.68
2.66	0.00	91.72	72.72
2.95	0.00	99.58	80.79
3.52	0.00	124.48	99.83
4.10	0.00	142.91	114.47
4.67	0.00	163.86	131.38
5.24	0.00	181.21	146.77
5.80	0.00	205.11	163.78

Table 33 Fluorescence intensity obtained from the titration of daptomycin to PAMAM dendrimer generation 5 solution at pH 4 (replication = 2)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity			
		I		II	
		at 355 nm	at 460 nm	at 355 nm	at 460 nm
0.00	0.05	5.67	5.81	5.59	7.55
0.30	0.05	9.00	77.17	10.12	84.55
0.60	0.05	10.12	145.56	10.34	153.76
0.89	0.05	11.93	231.06	12.06	229.96
1.19	0.05	14.15	321.61	14.12	318.32
1.49	0.05	16.95	404.14	16.74	394.25
1.78	0.05	20.70	484.11	20.76	480.68
2.07	0.05	24.02	538.04	24.70	543.03
2.37	0.05	30.80	585.64	28.82	592.06
2.66	0.05	36.01	620.81	35.87	626.34
2.95	0.04	42.71	649.15	42.24	655.92
3.52	0.04	59.13	695.93	57.63	713.69
4.10	0.04	75.07	733.69	73.90	743.53
4.67	0.04	91.63	762.45	89.84	773.90
5.24	0.04	105.31	782.60	103.45	797.38
5.80	0.04	118.89	798.44	119.96	817.91

Table 34 Fluorescence intensity obtained from the titration of daptomycin to double-distilled water at pH 4

[Dap] (μM)	[Den] (μM)	Fluorescence intensity	
		at 355 nm	at 460 nm
0.00	0.00	4.74	4.43
0.30	0.00	14.48	13.08
0.60	0.00	28.70	22.11
0.89	0.00	42.80	37.89
1.19	0.00	52.72	41.90
1.49	0.00	68.49	52.67
1.78	0.00	76.92	59.88
2.07	0.00	86.11	69.55
2.37	0.00	91.52	73.03
2.66	0.00	96.75	77.45
2.95	0.00	102.60	82.51
3.52	0.00	127.89	100.93
4.10	0.00	149.26	122.41
4.67	0.00	167.87	143.24
5.24	0.00	187.10	152.47
5.80	0.00	204.03	172.63

Table 35 Fluorescence intensity obtained from the titration of daptomycin to PAMAM dendrimer generation 5 solution at pH 4.5 (replication = 2)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity			
		I		II	
		at 355 nm	at 460 nm	at 355 nm	at 460 nm
0.00	0.05	5.41	5.48	6.23	7.22
0.30	0.05	10.04	59.09	10.58	62.52
0.60	0.05	10.47	153.62	11.76	159.87
0.89	0.05	12.78	241.89	12.93	233.94
1.19	0.05	15.31	335.46	15.16	320.81
1.49	0.05	17.58	425.55	17.80	391.56
1.78	0.05	21.73	508.32	21.05	458.16
2.07	0.05	25.85	564.57	25.80	522.97
2.37	0.05	31.35	605.68	31.46	569.22
2.66	0.05	37.61	628.08	37.77	598.27
2.95	0.04	43.35	648.32	45.32	621.94
3.52	0.04	59.60	695.60	62.46	674.17
4.10	0.04	73.89	737.02	75.44	716.28
4.67	0.04	88.15	767.94	89.89	747.11
5.24	0.04	104.53	795.26	105.07	777.03
5.80	0.04	122.81	818.20	120.87	799.82

Table 36 Fluorescence intensity obtained from the titration of daptomycin to double-distilled water at pH 4.5

[Dap] (μM)	[Den] (μM)	Fluorescence intensity	
		at 355 nm	at 460 nm
0.00	0.00	4.39	4.31
0.30	0.00	16.57	13.72
0.60	0.00	28.67	24.39
0.89	0.00	39.68	32.61
1.19	0.00	49.89	40.39
1.49	0.00	56.16	46.54
1.78	0.00	62.16	51.46
2.07	0.00	69.26	58.13
2.37	0.00	77.84	66.19
2.66	0.00	85.57	72.66
2.95	0.00	92.09	78.39
3.52	0.00	116.59	97.82
4.10	0.00	140.42	116.25
4.67	0.00	159.50	135.17
5.24	0.00	181.02	152.68
5.80	0.00	203.10	172.49

Table 37 Fluorescence intensity obtained from the titration of daptomycin to PAMAM dendrimer generation 5 solution at pH 5 (replication = 2)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity			
		I		II	
		at 355 nm	at 460 nm	at 355 nm	at 460 nm
0.00	0.27	8.64	9.26	10.53	10.71
0.60	0.27	24.46	104.43	28.02	112.75
1.20	0.27	33.61	259.88	33.07	270.08
1.79	0.27	36.16	418.41	37.94	433.62
2.38	0.27	42.52	559.53	44.85	581.21
2.98	0.27	49.73	694.46	51.26	707.34
3.56	0.27	57.59	786.90	63.40	795.06
4.15	0.27	69.21	846.27	69.80	830.31
4.74	0.27	75.81	869.82	77.48	857.62
5.32	0.27	92.70	889.57	94.75	883.86
5.90	0.27	111.38	907.58	115.03	900.62
7.06	0.27	159.51	951.08	161.34	943.17
8.21	0.27	210.74	992.54	212.34	986.29

Table 38 Fluorescence intensity obtained from the titration of daptomycin to double-distilled water at pH 5

[Dap] (μM)	[Den] (μM)	Fluorescence intensity	
		at 355 nm	at 460 nm
0.00	0.00	4.48	3.58
0.60	0.00	56.59	20.07
1.20	0.00	104.61	37.64
1.79	0.00	147.52	53.28
2.38	0.00	177.70	65.79
2.98	0.00	201.97	75.26
3.56	0.00	225.07	86.92
4.15	0.00	251.12	99.67
4.74	0.00	288.05	116.88
5.32	0.00	303.07	130.13
5.90	0.00	328.95	147.30
7.06	0.00	412.23	183.98
8.21	0.00	485.36	219.08

Table 39 Fluorescence intensity obtained from the titration of daptomycin to PAMAM dendrimer generation 5 solution at pH 6 (replication = 2)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity			
		I		II	
		at 355 nm	at 460 nm	at 355 nm	at 460 nm
0.00	0.27	12.43	7.76	12.06	9.69
0.60	0.27	36.90	132.42	34.24	139.79
1.20	0.27	36.60	275.57	35.91	292.29
1.79	0.27	42.41	412.56	39.43	434.98
2.38	0.27	51.07	529.31	45.41	561.11
2.98	0.27	62.72	615.37	52.33	670.66
3.56	0.27	76.64	663.81	63.46	750.60
4.15	0.27	80.61	689.83	71.79	778.50
4.74	0.27	89.84	709.57	77.72	796.82
5.32	0.27	114.07	730.45	95.54	813.99
5.90	0.27	138.98	749.10	116.38	836.47
7.06	0.27	194.29	781.89	166.49	861.08
8.21	0.27	249.40	814.13	221.27	889.69

Table 40 Fluorescence intensity obtained from the titration of daptomycin to double-distilled water at pH 5

[Dap] (μM)	[Den] (μM)	Fluorescence intensity	
		at 355 nm	at 460 nm
0.00	0.00	6.61	4.24
0.60	0.00	59.08	22.08
1.20	0.00	103.58	37.26
1.79	0.00	141.32	51.27
2.38	0.00	178.41	65.06
2.98	0.00	208.78	79.19
3.56	0.00	240.30	92.47
4.15	0.00	275.68	107.42
4.74	0.00	306.14	125.29
5.32	0.00	332.80	141.14
5.90	0.00	367.26	158.20
7.06	0.00	442.31	192.07
8.21	0.00	520.79	224.48

Table 41 Fluorescence intensity obtained from the titration of daptomycin to PAMAM dendrimer generation 5 solution at pH 7 (replication = 2)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity			
		I		II	
		at 355 nm	at 460 nm	at 355 nm	at 460 nm
0.00	0.27	10.95	8.19	11.17	7.78
0.60	0.27	38.88	140.00	38.02	130.54
1.20	0.27	39.45	314.66	41.77	290.75
1.79	0.27	48.24	445.26	49.33	424.89
2.38	0.27	60.31	547.31	62.82	521.61
2.98	0.27	76.00	610.13	79.63	577.45
3.56	0.27	82.16	645.82	88.69	617.68
4.15	0.27	91.47	675.76	98.85	655.60
4.74	0.27	114.40	700.23	118.01	679.24
5.32	0.27	140.56	716.78	143.32	693.25
5.90	0.27	166.28	731.14	168.93	710.99
6.48	0.27	194.80	753.02	198.26	732.09
7.06	0.27	224.06	772.56	229.65	750.89

Table 42 Fluorescence intensity obtained from the titration of daptomycin to double-distilled water at pH 7

[Dap] (μM)	[Den] (μM)	Fluorescence intensity	
		at 355 nm	at 460 nm
0.00	0.00	4.54	3.57
0.60	0.00	58.25	27.96
1.20	0.00	105.14	40.68
1.79	0.00	147.39	57.76
2.38	0.00	188.18	76.04
2.98	0.00	226.82	95.31
3.56	0.00	266.71	114.92
4.15	0.00	311.75	133.81
4.74	0.00	356.02	152.15
5.32	0.00	402.77	168.21
5.90	0.00	453.46	189.07
6.48	0.00	492.9	205.1
7.06	0.00	538.4	224.59

Table 43 Fluorescence intensity obtained from the titration of daptomycin to PAMAM dendrimer generation 5 solution at pH 8 (replication = 2)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity			
		I		II	
		at 355 nm	at 460 nm	at 355 nm	at 460 nm
0.00	0.27	21.74	17.78	20.89	17.30
0.60	0.27	40.59	160.26	39.01	148.40
1.20	0.27	45.11	315.64	41.36	314.14
1.79	0.27	59.99	430.22	53.57	434.22
2.38	0.27	77.04	490.47	68.83	517.26
2.98	0.27	85.03	534.80	83.28	560.20
3.56	0.27	100.71	562.78	88.36	588.56
4.15	0.27	129.58	584.76	109.65	611.55
4.74	0.27	157.72	599.09	139.09	627.81
5.32	0.27	189.86	618.98	166.34	643.29
5.90	0.27	222.11	636.70	196.24	655.61
6.48	0.27	257.09	654.84	228.73	671.90
7.06	0.27	293.68	675.05	262.46	689.55
7.63	0.27	323.83	694.23	298.06	702.69
8.21	0.27	374.05	711.31	334.03	724.14
8.78	0.27	414.66	729.03	373.90	744.68
9.35	0.27	456.72	749.27	415.49	759.84
9.92	0.27	496.78	767.79	452.14	782.79
10.49	0.27	541.40	789.10	498.13	801.14
11.05	0.27	581.85	806.79	536.11	816.12
11.61	0.27	622.40	822.54	576.49	833.61

Table 44 Fluorescence intensity obtained from the titration of daptomycin to double-distilled water at pH 8

[Dap] (μM)	[Den] (μM)	Fluorescence intensity	
		at 355 nm	at 460 nm
0.00	0.00	4.11	3.82
0.60	0.00	61.67	23.89
1.20	0.00	112.05	42.59
1.79	0.00	154.86	61.59
2.38	0.00	201.45	79.99
2.98	0.00	243.33	98.63
3.56	0.00	294.51	118.82
4.15	0.00	347.26	139.14
4.74	0.00	398.12	160.17
5.32	0.00	447.75	176.72
5.90	0.00	495.43	197.1
6.48	0.00	547.1	215.38
7.06	0.00	593.68	232.64
7.63	0.00	641.85	249.49
8.21	0.00	688.63	268.3
8.78	0.00	730.47	286.32
9.35	0.00	779.2	302.65
9.92	0.00	820.13	320.63
10.49	0.00	866	337.09
11.05	0.00	903.17	352.58
11.61	0.00	947.09	369.03
0.00	0.00	4.11	3.82
0.60	0.00	61.67	23.89
1.20	0.00	112.05	42.59

Table 45 Fluorescence intensity obtained from the titration of daptomycin to PAMAM dendrimer generation 5 solution at pH 9 (replication = 2)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity			
		I		II	
		at 355 nm	at 460 nm	at 355 nm	at 460 nm
0.00	0.27	37.80	21.12	35.41	19.51
0.60	0.27	106.91	49.70	100.10	48.76
1.20	0.27	166.71	74.83	155.27	75.84
1.79	0.27	221.18	99.19	202.38	100.40
2.38	0.27	269.76	123.11	253.00	126.45
2.98	0.27	322.88	147.30	297.93	148.82
3.56	0.27	366.90	168.45	340.64	172.29
4.15	0.27	408.81	193.23	380.04	199.89
4.74	0.27	450.60	213.31	421.64	226.16
5.32	0.27	487.47	239.57	454.55	250.99
5.90	0.27	522.60	263.90	489.42	282.89
7.06	0.27	595.58	316.70	566.23	340.82
8.21	0.27	661.05	375.89	643.80	385.88
9.35	0.27	724.07	424.96	717.39	425.89
10.49	0.27	793.35	464.26	789.73	465.54
11.61	0.27	866.71	503.72	860.59	503.12

Table 46 Fluorescence intensity obtained from the titration of daptomycin to double-distilled water at pH 9

[Dap] (μM)	[Den] (μM)	Fluorescence intensity	
		at 355 nm	at 460 nm
0.00	0.00	8.54	4.45
0.60	0.00	74.79	27.27
1.20	0.00	135.33	46.83
1.79	0.00	192	66.71
2.38	0.00	248.16	86.88
2.98	0.00	300.15	105.54
3.56	0.00	350.04	124.17
4.15	0.00	403.11	144.92
4.74	0.00	453.02	162.74
5.32	0.00	505.23	181.29
5.90	0.00	553.83	200.46
7.06	0.00	644.35	235.63
8.21	0.00	735.58	270.17
9.35	0.00	824.99	304.62
10.49	0.00	905.38	336.72
11.61	0.00	981.94	367.46

Table 47 Fluorescence intensity at 460 nm obtained from the titration of daptomycin to PAMAM dendrimer generation 6 solution at pH 3.5 (replication = 3)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity		
		I	II	III
0.00	0.01	6.64	7.25	7.08
0.12	0.01	26.2	35.87	32.92
0.25	0.01	48.46	63.23	55.01
0.37	0.01	70.13	82.48	76.31
0.49	0.01	87.06	102.79	95.26
0.61	0.01	103.30	117.69	110.53
0.73	0.01	117.83	128.51	124.35
0.85	0.01	129.42	140.65	131.98
0.97	0.01	145.84	151.51	142.92
1.09	0.01	149.63	159.17	150.56
1.21	0.01	158.91	167.38	159.40
1.33	0.01	166.74	172.45	166.63
1.45	0.01	173.06	178.40	174.92
1.57	0.01	178.61	182.30	182.85
1.69	0.01	185.34	187.12	188.53
1.81	0.01	192.94	194.71	193.69
1.92	0.01	198.23	199.24	197.59
2.04	0.01	203.05	205.36	204.22
2.16	0.01	209.59	210.89	207.38
2.27	0.01	213.54	215.37	213.94
2.39	0.01	217.97	221.92	219.86
2.62	0.01	229.54	232.08	228.02
2.85	0.01	241.10	242.17	237.02
3.08	0.01	249.99	250.27	247.69
3.30	0.01	258.42	260.24	256.39
3.75	0.01	277.58	278.50	274.38
4.19	0.01	295.60	294.72	292.30
4.63	0.01	312.68	312.03	309.89
5.27	0.01	336.83	336.57	333.65
5.91	0.01	358.94	359.57	359.59
6.73	0.01	387.03	387.71	382.09

Table 48 Fluorescence intensity at 460 nm obtained from the titration of daptomycin to double-distilled water at pH 3.5 (replications = 3)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity		
		I	II	III
0.00	0.00	4.82	4.67	5.37
0.61	0.00	27.62	25.79	28.87
1.21	0.00	48.81	48.46	51.43
1.81	0.00	69.78	70.31	71.93
2.39	0.00	91.43	90.37	92.32
3.30	0.00	123.81	124.12	124.2
4.63	0.00	171.66	170.94	172.03
6.73	0.00	243.58	246.51	243.76

Table 49 Fluorescence intensity at 460 nm obtained from the titration of daptomycin to PAMAM dendrimer generation 6 solution at pH 4 (replication = 3)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity		
		I	II	III
0.00	0.01	6.67	7.94	10.48
0.12	0.01	28.35	23.59	25.26
0.25	0.01	57.16	52.23	57.57
0.37	0.01	93.72	89.75	89.45
0.49	0.01	128.29	123.55	119.90
0.61	0.01	156.10	150.65	145.64
0.73	0.01	181.93	171.79	166.15
0.85	0.01	199.42	190.17	182.33
0.97	0.01	213.21	207.03	198.65
1.09	0.01	222.74	221.03	209.31
1.21	0.01	234.54	232.85	217.48
1.33	0.01	244.09	244.10	230.70
1.45	0.01	249.70	254.65	234.81
1.57	0.01	258.80	261.15	241.75
1.69	0.01	265.78	269.58	246.23
1.81	0.01	271.45	278.05	258.16
1.92	0.01	279.24	283.18	259.82
2.04	0.01	282.75	291.73	264.62
2.16	0.01	287.50	297.58	270.47
2.27	0.01	293.93	300.90	277.34
2.39	0.01	299.30	310.90	279.20
2.62	0.01	306.94	317.94	292.26
2.85	0.01	318.92	330.24	299.97
3.08	0.01	328.33		316.07
3.30	0.01	336.94	349.72	321.21
3.75	0.01	355.03	370.84	338.53
4.19	0.01	373.94	390.23	357.86
4.63	0.01	391.84	407.55	378.51
5.27	0.01	418.92	437.22	407.55
5.91	0.01	441.44	461.88	433.14
6.73	0.01	473.37	492.25	466.25

Table 50 Fluorescence intensity at 460 nm obtained from the titration of daptomycin to double-distilled water at pH 4 (replications = 3)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity		
		I	II	III
0.00	0.01	8.23	8.18	8.93
0.61	0.01	27.21	26.9	28.34
1.21	0.01	49.55	50.05	54.67
1.81	0.01	71.87	70.93	76.84
2.39	0.01	93.25	95.04	97.23
3.30	0.01		129.3	134.93
4.63	0.01	177.24	179.35	184.99
6.73	0.01	256	254.04	260.88

Table 51 Fluorescence intensity at 460 nm obtained from the titration of daptomycin to PAMAM dendrimer generation 6 solution at pH 4.5 (replication = 3)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity		
		I	II	III
0.00	0.01	6.49	6.55	6.82
0.12	0.01	24.23	40.55	40.17
0.25	0.01	60.28	75.69	65.11
0.37	0.01	93.42	105.22	96.10
0.49	0.01	117.03	134.14	124.92
0.61	0.01	144.02	157.79	149.18
0.73	0.01	160.77	179.28	168.66
0.85	0.01	177.68	197.06	182.38
0.97	0.01	187.11	209.86	194.69
1.09	0.01	194.94	221.50	205.90
1.21	0.01	203.39	229.64	213.17
1.33	0.01	208.23	236.25	222.38
1.45	0.01	214.39	245.01	229.36
1.57	0.01	219.11	249.01	238.18
1.69	0.01	224.08	255.94	241.16
1.81	0.01	229.18	260.88	246.83
1.92	0.01	235.14	265.91	253.84
2.04	0.01	238.53	273.57	260.27
2.16	0.01	242.61	279.24	266.84
2.27	0.01	248.41	285.92	271.93
2.39	0.01	252.34	292.73	276.88
2.62	0.01	265.46	304.68	287.60
2.85	0.01	274.89	315.09	298.66
3.08	0.01	283.16	325.22	308.45
3.30	0.01	292.06	334.40	318.88
3.75	0.01	310.76	354.87	336.65
4.19	0.01	326.62	373.03	355.71
4.63	0.01	343.34	389.21	371.88
5.27	0.01	368.75	412.08	401.07
5.91	0.01	387.75	435.29	425.45
6.73	0.01	417.74	458.50	451.23

Table 52 Fluorescence intensity at 460 nm obtained from the titration of daptomycin to double-distilled water at pH 4.5 (replications = 3)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity		
		I	II	III
0.00	0.00	6.28	6.64	6.15
0.61	0.00	27.67	28.32	27.41
1.21	0.00	50.74	50.72	51.32
1.81	0.00	75.61	75.56	73.11
2.39	0.00	97.99	94.85	96.04
3.30	0.00	132.53	130.29	129.18
4.63	0.00	182.75	176.9	180.61
6.73	0.00	262.69	256.77	255.11

Table 53 Fluorescence intensity at 460 nm obtained from the titration of daptomycin to PAMAM dendrimer generation 6 solution at pH 5 (replication = 3)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity		
		I	II	III
0.00	0.01	6.31	5.22	4.78
0.12	0.01	25.41	21.16	18.19
0.25	0.01	57.34	49.42	50.18
0.37	0.01	91.97	84.74	83.31
0.49	0.01	126.38	112.68	114.56
0.61	0.01	156.50	146.48	143.86
0.73	0.01	178.53	171.29	161.21
0.85	0.01	193.14	188.67	183.35
0.97	0.01	203.10	202.65	188.66
1.09	0.01	209.41	210.13	201.35
1.21	0.01	215.65	217.98	211.91
1.33	0.01	224.20	227.52	218.22
1.45	0.01	230.82	237.25	226.44
1.57	0.01	237.78	240.70	234.58
1.69	0.01	242.89	249.02	240.49
1.81	0.01	250.17	255.79	250.49
1.92	0.01	253.58	262.26	257.72
2.04	0.01	260.02	266.79	262.96
2.16	0.01	265.02	268.67	265.20
2.27	0.01	269.91	275.34	271.71
2.39	0.01	274.50	279.95	278.50
2.62	0.01	283.37	289.50	284.70
2.85	0.01	291.51	299.60	294.70
3.08	0.01	299.85	306.38	306.83
3.30	0.01	310.14	313.97	318.55
3.75	0.01	329.76	333.12	336.49
4.19	0.01	345.15	352.22	356.10
4.63	0.01	357.92	367.23	373.71
5.27	0.01	384.31	394.66	402.16
5.91	0.01	407.34	420.78	425.13
6.73	0.01	435.05	446.67	454.94

Table 54 Fluorescence intensity at 460 nm obtained from the titration of daptomycin to double-distilled water at pH 5 (replications = 3)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity		
		I	II	III
0.00	0.00	6.28	6.64	6.15
0.61	0.00	27.67	28.32	27.41
1.21	0.00	50.74	50.72	51.32
1.81	0.00	75.61	75.56	73.11
2.39	0.00	97.99	94.85	96.04
3.30	0.00	132.53	130.29	129.18
4.63	0.00	182.75	176.9	180.61
6.73	0.00	262.69	256.77	255.11

Table 55 Fluorescence intensity at 460 nm obtained from the titration of daptomycin to PAMAM dendrimer generation 6 solution at pH 6 (replication = 3)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity		
		I	II	III
0.00	0.01	7.48	5.34	6.10
0.12	0.01	36.87	37.13	38.47
0.25	0.01	74.29	72.82	69.64
0.37	0.01	89.28	100.67	99.75
0.49	0.01	92.30	121.39	123.75
0.61	0.01	93.98	127.80	134.46
0.73	0.01	94.67	132.95	140.15
0.85	0.01	95.05	136.07	143.28
0.97	0.01	96.94	139.39	149.00
1.09	0.01	100.45	143.06	152.65
1.21	0.01	103.69	146.41	158.57
1.33	0.01	105.65	147.96	158.82
1.45	0.01	109.92	152.14	162.93
1.57	0.01	112.72	156.17	166.48
1.69	0.01	113.22	157.37	166.08
1.81	0.01	117.70	162.78	171.82
1.92	0.01	119.83	163.76	175.02
2.04	0.01	123.61	169.41	179.45
2.16	0.01	130.33	172.12	181.89
2.27	0.01	129.31	174.34	187.34
2.39	0.01	131.84	177.50	188.44
2.62	0.01	139.57	186.07	195.41
2.85	0.01	148.01	191.86	203.96
3.08	0.01	155.98		212.33
3.30	0.01	162.44	206.40	218.48
3.75	0.01	178.51	223.11	238.29
4.19	0.01	192.53	237.93	249.24
4.63	0.01	207.37	253.89	262.14
5.27	0.01	232.65	277.27	284.73
5.91	0.01	254.80	299.23	303.99
6.73	0.01	282.76	325.38	333.45

Table 56 Fluorescence intensity at 460 nm obtained from the titration of daptomycin to double-distilled water at pH 6 (replications = 3)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity		
		I	II	III
0.00	0.01	4.53	4.18	5.49
0.61	0.01	28.73	26.1	26.21
1.21	0.01	51.61	49.11	46.84
1.81	0.01	75.3	70.44	69.01
2.39	0.01	96.85	91.35	92.07
3.30	0.01	131.84	128.9	126.44
4.63	0.01	182.02	177.73	178.11
6.73	0.01	239.02	233.89	230.88

Table 57 Fluorescence intensity at 460 nm obtained from the titration of daptomycin to PAMAM dendrimer generation 6 solution at pH 7 (replication = 3)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity		
		I	II	III
0.00	0.01	7.53	8.73	8.65
0.12	0.01	40.77	39.71	37.85
0.25	0.01	67.18	64.91	63.79
0.37	0.01	75.57	77.18	79.91
0.49	0.01	78.75	79.68	86.28
0.61	0.01	82.89	84.73	90.88
0.73	0.01	85.79	87.86	93.28
0.85	0.01	88.24	88.05	96.36
0.97	0.01	90.01	91.16	100.23
1.09	0.01	92.35	94.08	102.79
1.21	0.01	96.04	99.14	104.81
1.33	0.01	101.13	100.65	109.01
1.45	0.01	102.61	104.05	112.55
1.57	0.01		107.87	116.85
1.69	0.01	110.98	112.17	120.03
1.81	0.01	113.32	113.57	123.57
1.92	0.01	116.42	118.27	130.51
2.04	0.01	118.84	123.29	131.62
2.16	0.01	122.56	125.19	133.79
2.27	0.01	126.08	128.94	139.16
2.39	0.01	127.59	133.57	141.91
2.62	0.01	135.75	140.55	150.28
2.85	0.01	141.37	146.87	154.37
3.08	0.01	148.55	155.55	163.61
3.30	0.01	157.46	161.75	170.47
3.75	0.01	171.59	176.84	186.33
4.19	0.01	185.50	192.01	199.40
4.63	0.01	202.05	204.91	212.41
5.27	0.01	223.45	226.55	235.45
5.91	0.01	246.44	246.62	255.67
6.73	0.01	275.91	274.85	284.09

Table 58 Fluorescence intensity at 460 nm obtained from the titration of daptomycin to double-distilled water at pH 7 (replications = 3)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity		
		I	II	III
0.00	0.00	5.71	6.36	7.45
0.61	0.00	30.25	29.59	28.91
1.21	0.00	53.97	53.58	52.88
1.81	0.00	76.00	77.48	78.99
2.39	0.00	96.85	96.85	100.27
3.30	0.00	133.16	136.34	131.89
4.63	0.00	181.46	184.67	177.98
6.73	0.00	257.86	266.61	254.55

Table 59 Fluorescence intensity at 460 nm obtained from the titration of daptomycin to PAMAM dendrimer generation 3 solution at pH 4 (replication = 3)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity		
		I	II	III
0.00	0.14	9.88	9.75	10.19
0.12	0.14	19.26	21.87	18.74
0.25	0.14	42.31	37.08	40.16
0.37	0.14	66.43	59.77	60.63
0.49	0.14	92.18	83.00	82.56
0.61	0.14	116.84	109.10	108.57
0.73	0.14	140.50	132.54	128.84
0.85	0.14	166.71	155.73	154.48
0.97	0.14	190.17	177.81	177.90
1.09	0.14	213.40	200.33	198.91
1.21	0.14	233.88	221.37	220.42
1.33	0.14	253.53	242.51	240.04
1.45	0.14	269.20	260.11	256.74
1.57	0.14	284.83	275.92	273.42
1.69	0.14	301.54	291.74	285.63
1.81	0.14	311.19	304.92	300.57
1.92	0.14	324.55	317.96	312.99
2.04	0.14	336.14	330.96	326.57
2.16	0.14	347.22	340.27	333.90
2.27	0.14	356.39	348.39	343.53
2.39	0.14	362.98	360.31	355.67
2.62	0.14	382.49	376.25	376.76
2.85	0.14	396.84	397.01	395.37
3.08	0.14	414.00	414.01	408.05
3.30	0.14	424.25	428.55	422.41
3.75	0.14	458.72	459.91	452.69
4.19	0.14	480.60	489.76	481.05
4.63	0.14	505.96	513.05	504.75
5.27	0.14	544.30	553.94	546.77
5.91	0.14	589.71	586.25	585.10
6.73	0.14	633.62	636.34	632.14

Table 60 Fluorescence intensity at 460 nm obtained from the titration of daptomycin to double-distilled water at pH 4 (replications = 3)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity		
		I	II	III
0.00	0.00	5.61	5.31	6.60
0.61	0.00	23.27	25.00	26.94
1.21	0.00	47.02	47.34	47.86
1.81	0.00	70.82	70.29	70.48
2.39	0.00	94.78	89.96	92.18
3.30	0.00	127.13	126.90	128.00
4.63	0.00	174.46	175.02	176.68
6.73	0.00	250.90	251.14	252.11

Table 61 Fluorescence intensity at 460 nm obtained from the titration of daptomycin to PAMAM dendrimer generation 3 solution at pH 7 (replication = 3)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity		
		I	II	III
0.00	0.14	10.44	9.30	11.08
0.12	0.14	34.05	34.91	39.28
0.25	0.14	56.82	61.07	66.22
0.37	0.14	86.36	90.48	93.58
0.49	0.14	114.74	117.98	122.27
0.61	0.14	133.74	139.40	141.12
0.73	0.14	148.83	158.36	160.42
0.85	0.14	161.63	171.55	171.17
0.97	0.14	168.50	181.53	182.63
1.09	0.14	171.87	190.47	190.15
1.21	0.14	175.10	197.44	194.46
1.33	0.14	179.05	202.30	198.18
1.45	0.14	179.50	205.86	203.92
1.57	0.14	182.67	209.96	207.63
1.69	0.14	183.08	212.19	211.20
1.81	0.14	186.13	215.90	220.09
1.92	0.14	186.75	218.84	220.11
2.04	0.14	188.29	219.90	216.58
2.16	0.14	191.49	223.85	218.61
2.27	0.14	193.00	225.10	219.03
2.39	0.14	194.08	226.25	222.76
2.62	0.14	200.98	232.63	225.81
2.85	0.14	205.84	239.18	233.10
3.08	0.14	211.46	243.10	237.33
3.30	0.14	216.76	248.36	242.48
3.75	0.14	231.81	263.49	255.01
4.19	0.14	245.84	276.11	268.95
4.63	0.14	256.51	289.20	278.62
5.27	0.14	277.88	308.36	297.16
5.91	0.14	297.73	326.88	316.34
6.73	0.14	326.68	358.01	342.90

Table 62 Fluorescence intensity at 460 nm obtained from the titration of daptomycin to double-distilled water at pH 7 (replications = 3)

[Dap] (μM)	[Den] (μM)	Fluorescence intensity		
		I	II	III
0.00	0.00	5.56	5.29	5.06
0.61	0.00	32.73	27.43	27.90
1.21	0.00	52.84	45.69	47.77
1.81	0.00	75.51	69.52	67.12
2.39	0.00	95.50	89.32	87.68
3.30	0.00	127.27	119.15	118.18
4.63	0.00	171.97	163.95	163.46
6.73	0.00	239.91	230.71	229.04

Vita

Miss Boontarika Chanvorachote was born on June 17, 1981 in Bangkok. She received her B.Sc. in Chemistry from the Faculty of Science, Mahidol University in 2001.