

ID: 5462949

“Preparation and characterization of liposomal everolimus by thin-film hydration technique”

Supplementary Materials

The supplementary section is divided in two appendixes: appendix A, being tables with numerical data obtained for size, PDI, and zeta potential of liposomes, and appendix B, being the statistical analysis numerical evidence of results stated in the manuscript.

Appendix A

Table A.1 Hydrodynamic diameter obtained by DLS for samples A-E where POPC: Chol: DOPC / Lipid: drug (L: F) ratios are observed. The average \pm standard deviation is shown, where $n = 3$.

Week	Blank (9:1:0 / N.A)	Sample A (9:1:0 / 60:1)	Sample B (9:1:0 / 45:1)	Sample C (9:1:0 / 30:1)	Sample D (3:7:0 / 60:1)	Sample E (0:1:9 / 60:1)
1	120.18 \pm 13.2	117.31 \pm 9.4	118.22 \pm 4	123.95 \pm 2.5	119.23 \pm 14.1	142.07 \pm 23.1
2	117.15 \pm 8.2	113.03 \pm 9.3	120.27 \pm 3.7	121.3 \pm 1.2	118 \pm 13.4	141.14 \pm 23.8
3	114.23	112.8 \pm 9.9	118.63 \pm 3.4	123.03 \pm 1.2	120 \pm 15.1	140.9 \pm 22.9
4	113.5	115.56 \pm 10.8	118.79 \pm 5.2	121.69 \pm 0.9	121.86 \pm 14.4	138.61 \pm 26.7

Table A.2 Polydispersity index obtained by DLS for samples A-E where POPC: Chol: DOPC / L: F ratios are observed. The average \pm standard deviation is shown, where $n = 3$.

Week	Blank (9:1:0 / N.A)	Sample A (9:1:0 / 60:1)	Sample B (9:1:0 / 45:1)	Sample C (9:1:0 / 30:1)	Sample D (3:7:0 / 60:1)	Sample E (0:1:9 / 60:1)
1	0.078 \pm 0.21	0.124 \pm 0.05	0.111 \pm 0.026	0.114 \pm 0.041	0.129 \pm 0.052	0.143 \pm 0.045
2	0.072 \pm 0.006	0.086 \pm 0.036	0.108 \pm 0.02	0.078 \pm 0.009	0.132 \pm 0.036	0.134 \pm 0.031
3	0.077	0.082 \pm 0.047	0.08 \pm 0.011	0.082 \pm 0.006	0.109 \pm 0.009	0.139 \pm 0.036
4	0.054	0.127 \pm 0.038	0.097 \pm 0.042	0.08 \pm 0.024	0.131 \pm 0.045	0.118 \pm 0.01

Table A.3 Zeta potential obtained for samples A-E where POPC: Chol: DOPC / L: F ratios are observed. The average \pm standard deviation is shown, where $n = 3$.

Week	Blank (9:1:0 / N.A)	Sample A (9:1:0 / 60:1)	Sample B (9:1:0 / 45:1)	Sample C (9:1:0 / 30:1)	Sample D (3:7:0 / 60:1)	Sample E (0:1:9 / 60:1)
1	-14.43 \pm 6.6	-11.05 \pm 1.1	-9.65 \pm 1.4	-9.68 \pm 2.2	-13.24 \pm 0.8	-11.87 \pm 1.5
2	-13.03 \pm 4.4	-8.97 \pm 2.1	-11.74 \pm 2.4	-12.30 \pm 2.1	-11.7 \pm 2.5	-11.12 \pm 2.9
3	-10.993	-9.30 \pm 1.1	-8.11 \pm 1.4	-12.98 \pm 0.5	-15.6 \pm 5.0	-10.80 \pm 2.3

4	-7.483	-11.53±1.1	-8.94±0.3	-10.53±1.9	-11.01±1.2	-10.32±0.5
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Appendix B

Table B.1 P-Values obtained by Tukey test for comparison between samples, where "ns" is not significant and the asterisks denote how significant the difference is.

Tukey test comparison	Size		PDI		Zeta Potential	
	Significance	P-Value	Significance	P-Value	Significance	P-Value
9:1:0 / N.A vs. 9:1:0 / 60:1	ns	0.999	ns	0.1861	ns	>0.9999
9:1:0 / N.A vs. 9:1:0 / 30:1	ns	0.9604	ns	0.3436	ns	0.9852
9:1:0 / N.A vs. 9:1:0 / 45:1	ns	0.9997	ns	0.7173	ns	0.9572
9:1:0 / N.A vs. 7:3:0 / 60:1	ns	0.9984	**	0.0021	ns	0.7061
9:1:0 / N.A vs. 0:1:9 / 60:1	**	0.009	**	0.0022	ns	0.9278
9:1:0 / 60:1 vs. 9:1:0 / 30:1	ns	0.686	ns	0.998	ns	0.988
9:1:0 / 60:1 vs. 9:1:0 / 45:1	ns	0.9647	ns	0.8443	ns	0.8284
9:1:0 / 60:1 vs. 7:3:0 / 60:1	ns	0.929	ns	0.2868	ns	0.3952
9:1:0 / 60:1 vs. 0:1:9 / 60:1	***	0.0002	ns	0.2907	ns	0.7533
9:1:0 / 30:1 vs. 9:1:0 / 45:1	ns	0.9853	ns	0.9743	ns	0.449
9:1:0 / 30:1 vs. 7:3:0 / 60:1	ns	0.9955	ns	0.1269	ns	0.1273
9:1:0 / 30:1 vs. 0:1:9 / 60:1	*	0.0157	ns	0.129	ns	0.3664
9:1:0 / 45:1 vs. 7:3:0 / 60:1	ns	>0.9999	*	0.0211	ns	0.9781
9:1:0 / 45:1 vs. 0:1:9 / 60:1	**	0.0024	*	0.0216	ns	>0.9999
7:3:0 / 60:1 vs. 0:1:9 / 60:1	**	0.0037	ns	>0.9999	ns	0.9918

Table B.2 P-values obtained by Tukey test for the comparison of each sample in time, where “ns” is not significant and the asterisks denote how significant the difference is.

Tukey test comparison	Significance	P-Value of size	P-Value of PDI	P-Value of zeta potential
9:1:0 / N.A				
WEEK 1 vs. WEEK 2	ns	0.9993	0.998	0.8899
WEEK 1 vs. WEEK 3	ns	0.9931	0.9662	0.969
WEEK 1 vs. WEEK 4	ns	0.9881	0.9553	0.3105
WEEK 2 vs. WEEK 3	ns	0.9844	0.9863	>0.9999
WEEK 2 vs. WEEK 4	ns	0.9952	0.9798	0.6028
WEEK 3 vs. WEEK 4	ns	0.9622	>0.9999	0.7147
9:1:0 / 60:1				
WEEK 1 vs. WEEK 2	ns	0.5248	0.9778	0.6973
WEEK 1 vs. WEEK 3	ns	0.4301	0.9742	0.7944
WEEK 1 vs. WEEK 4	ns	0.9995	0.9984	0.9946
WEEK 2 vs. WEEK 3	ns	0.9986	>0.9999	0.9982
WEEK 2 vs. WEEK 4	ns	0.4562	0.9952	0.5442
WEEK 3 vs. WEEK 4	ns	0.3669	0.9938	0.6502
9:1:0 / 45:1				
WEEK 1 vs. WEEK 2	ns	0.9995	0.9975	0.6948
WEEK 1 vs. WEEK 3	ns	0.6779	>0.9999	0.8511
WEEK 1 vs. WEEK 4	ns	0.9562	>0.9999	0.9818
WEEK 2 vs. WEEK 3	ns	0.7451	0.9987	0.2426
WEEK 2 vs. WEEK 4	ns	0.9785	0.999	0.4645
WEEK 3 vs. WEEK 4	ns	0.9278	>0.9999	0.9727
9:1:0 / 30:1				

WEEK 1 vs. WEEK 2	ns	0.5599	0.9945	0.5252
WEEK 1 vs. WEEK 3	ns	0.663	0.9998	0.3219
WEEK 1 vs. WEEK 4	ns	0.6154	0.9965	0.9698
WEEK 2 vs. WEEK 3	ns	0.9983	0.9984	0.984
WEEK 2 vs. WEEK 4	ns	0.9997	>0.9999	0.7935
WEEK 3 vs. WEEK 4	ns	0.9998	0.9993	0.58
7:3:0 / 60:1				
WEEK 1 vs. WEEK 2	ns	0.9996	0.9994	0.8535
WEEK 1 vs. WEEK 3	ns	0.9501	0.9999	0.9568
WEEK 1 vs. WEEK 4	ns	0.9998	0.9947	0.6491
WEEK 2 vs. WEEK 3	ns	0.9731	0.9976	0.9911
WEEK 2 vs. WEEK 4	ns	>0.9999	0.9836	0.9827
WEEK 3 vs. WEEK 4	ns	0.9677	0.9981	0.9109
0:1:9 / 60:1				
WEEK 1 vs. WEEK 2	ns	0.9724	>0.9999	0.9702
WEEK 1 vs. WEEK 3	ns	>0.9999	0.9995	0.9431
WEEK 1 vs. WEEK 4	ns	0.8093	0.9879	0.9149
WEEK 2 vs. WEEK 3	ns	0.959	>0.9999	0.7468
WEEK 2 vs. WEEK 4	ns	0.9677	0.9935	0.6942
WEEK 3 vs. WEEK 4	ns	0.7747	0.9964	0.9997