

Supplementary Materials: Topical Sustained Delivery of Miltefosine Eluting Contact Lenses to Treat *Acanthamoeba* Keratitis

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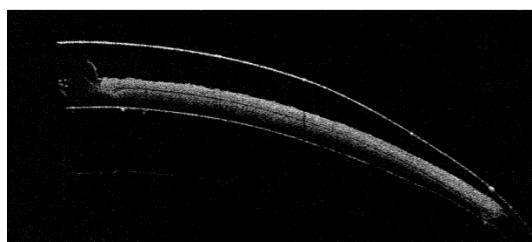


Figure S1. The OCT image of hydrated MLF-CL.

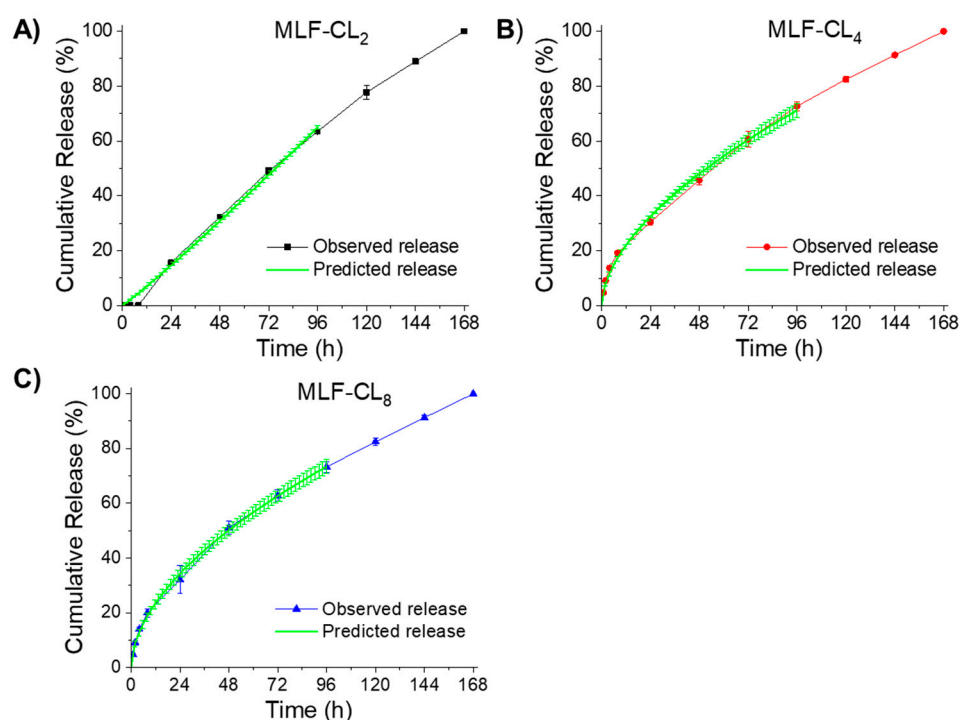


Figure S2. In vitro release profiles (actual cumulative release %) of MLF-CL and mathematical modeling (predicted release %) of the miltefosine release profiles. The in vitro release profiles of miltefosine from MLF-CL fit to the Korsmeyer-Peppas model. Data are shown as the means \pm SD, $n = 4$ for each group.

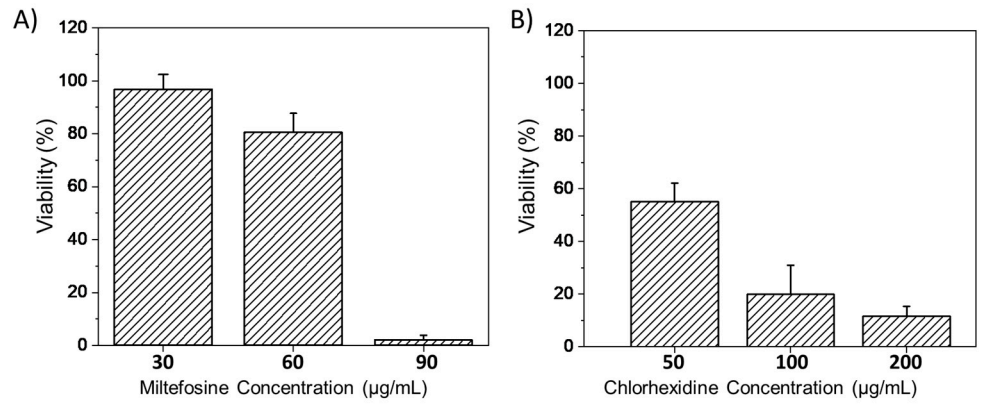


Figure S3. Cell viability of L929s subjected to different concentrations of A) Miltefosine (µg/mL) and B) Chlorhexidine free base drug (µg/mL).

Table S1. Mathematical model examination for the MLF release from MLF-CL. R^2 -adjusted, Akaike Information Criterion (AIC), and the Model Selection Criterion (MSC) were employed for model selection ($n=4$). The best model possesses the highest value of R^2 -adjusted, the lowest AIC value, and the largest MSC.

Model		MLF-CL ₂		MLF-CL ₄		MLF-CL ₈	
		Mean	SD	Mean	SD	Mean	SD
Zero-Order $Q_t = Q_0 + K_0t$	K_0 (%*h ⁻¹)	0.664	0.008	0.835	0.027	0.864	0.030
	R^2 -adjusted	0.991	0.001	0.879	0.021	0.856	0.029
	AIC	31.568	0.750	52.177	1.124	54.086	1.623
	MSC	4.023	0.082	1.875	0.192	1.706	0.202
First-Order $\ln Q_t = \ln Q_0 + K_1t$	K (%*h ⁻¹)	0.009	0.000	0.014	0.001	0.015	0.001
	R^2 -adjusted	0.971	0.001	0.950	0.013	0.952	0.015
	AIC	40.338	0.393	44.931	1.900	45.121	2.317
	MSC	2.927	0.061	2.781	0.315	2.826	0.359
Higuchi model $Q_t = K_H(t)^{1/2}$	K (%*h ^{-1/2})	5.244	0.075	7.025	0.215	7.306	0.273
	R^2 -adjusted	0.845	0.004	0.989	0.004	0.990	0.010
	AIC	54.375	0.083	33.001	3.169	29.251	8.464
	MSC	1.172	0.020	4.271	0.361	4.810	1.054
Korsmeyer-Peppas Model $Q_t/Q_\infty = K_k t^n$	K (%*h ⁻ⁿ)	0.480	0.054	5.382	0.501	6.004	0.825
	n	1.076	0.023	0.566	0.025	0.550	0.030
	R^2 -adjusted	0.992	0.002	0.994	0.002	0.994	0.008
	AIC	32.0378	1.6398	28.371	2.319	25.720	8.262
	MSC	3.9646	0.192	4.850	0.367	5.252	1.060