

Atorvastatin liposomes in a 3D-printed polymer film: a repurposing approach for local treatment of oral candidiasis

Drug Delivery and Translational Research

Supplementary material

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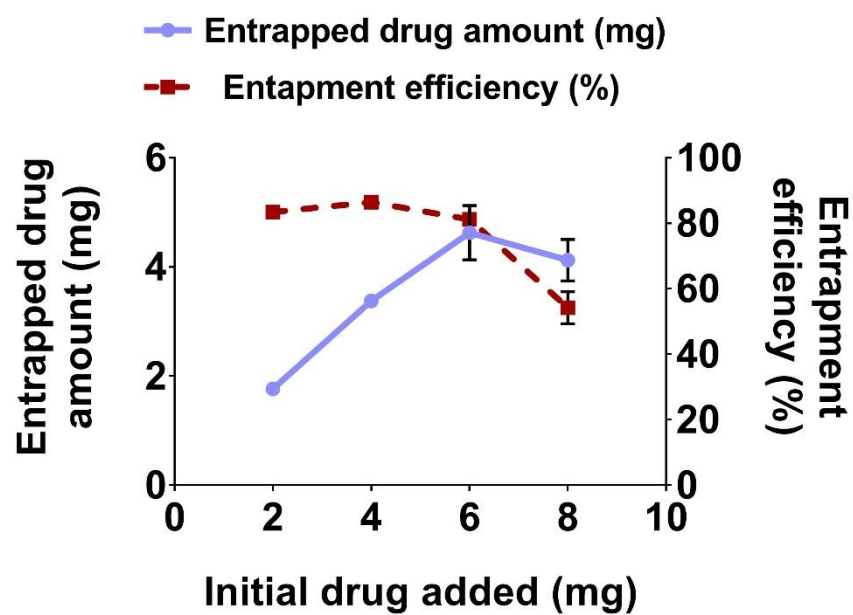


Fig. 1S Results of ATV entrapment in ATV/PG-Lip using different initial drug concentrations. Data indicates mean $\pm$ SD, $n = 3$, $p \leq 0.05$

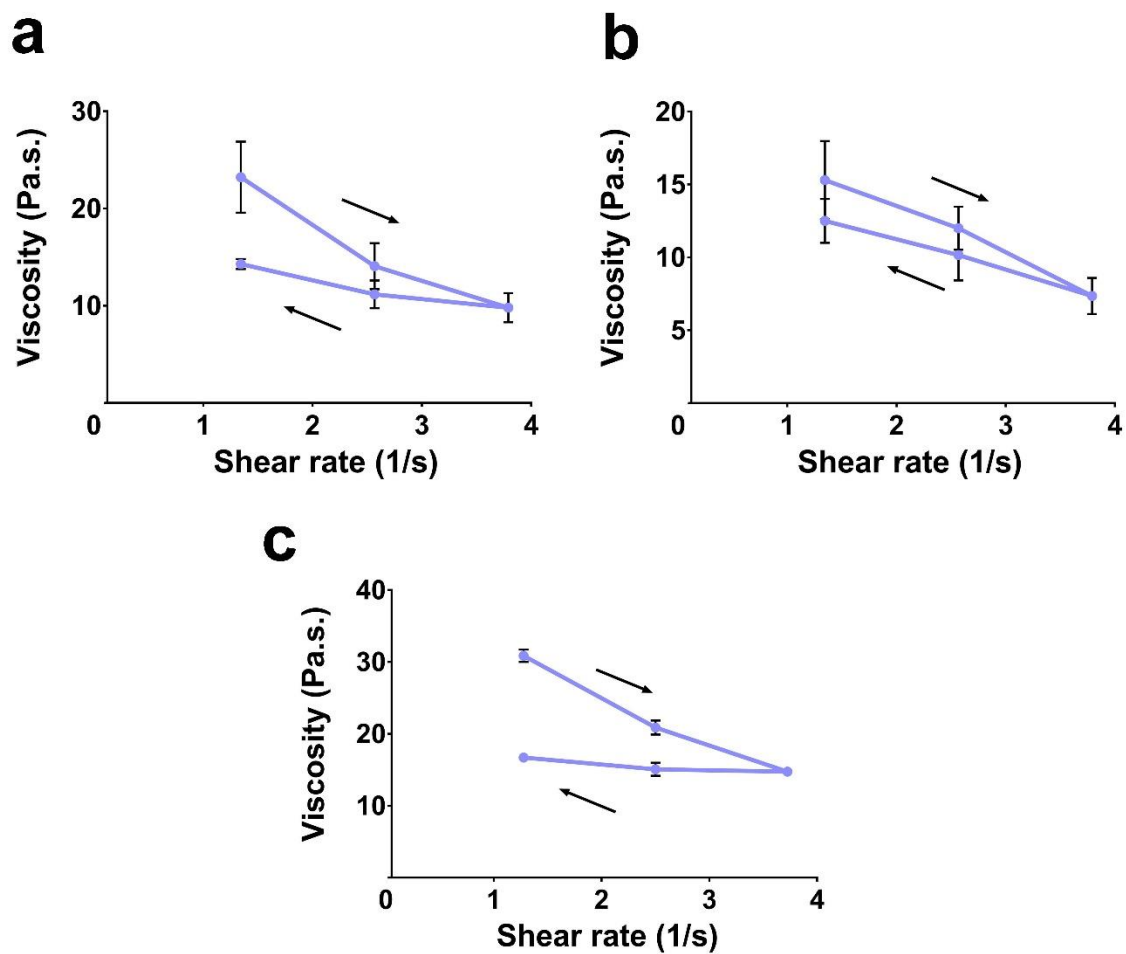


Fig. 2S Viscosity values of the prepared inks containing 3% (w/v) PVA, 3% (w/v) HPMC and 5% (w/v) chitosan at different shear rates (a-c). Curves for ATV@ink (a), PG-Lip@ink (b) and ATV/PG-Lip@ink (c)

Table 1S: Drug release kinetics modeling for different ATV formulations

Formulations	Release kinetics parameters ^a				
	Zero order	First order	Higuchi	Korsmeyer-Peppas	
	R^2	R^2	R^2	R^2	n
ATV solution	0.99 ± 0.001	0.92 ± 0.003	0.83 ± 0.001	0.99 ± 0.001	0.92 ± 0.015
ATV/PG-Lip	0.13 ± 0.017	0.87 ± 0.022	0.97 ± 0.005	0.96 ± 0.008	0.44 ± 0.003
ATV@3DP-film	0.74 ± 0.064	0.98 ± 0.002	0.87 ± 0.014	0.85 ± 0.001	0.33 ± 0.005
ATV/PG-Lip@3DP-film	0.57 ± 0.076	0.79 ± 0.001	0.98 ± 0.007	0.93 ± 0.012	0.31 ± 0.006
Biphasic 3DP-film	0.56 ± 0.084	0.96 ± 0.001	0.99 ± 0.005	0.91 ± 0.008	0.31 ± 0.007

^a Data indicates mean $\pm$ SD.

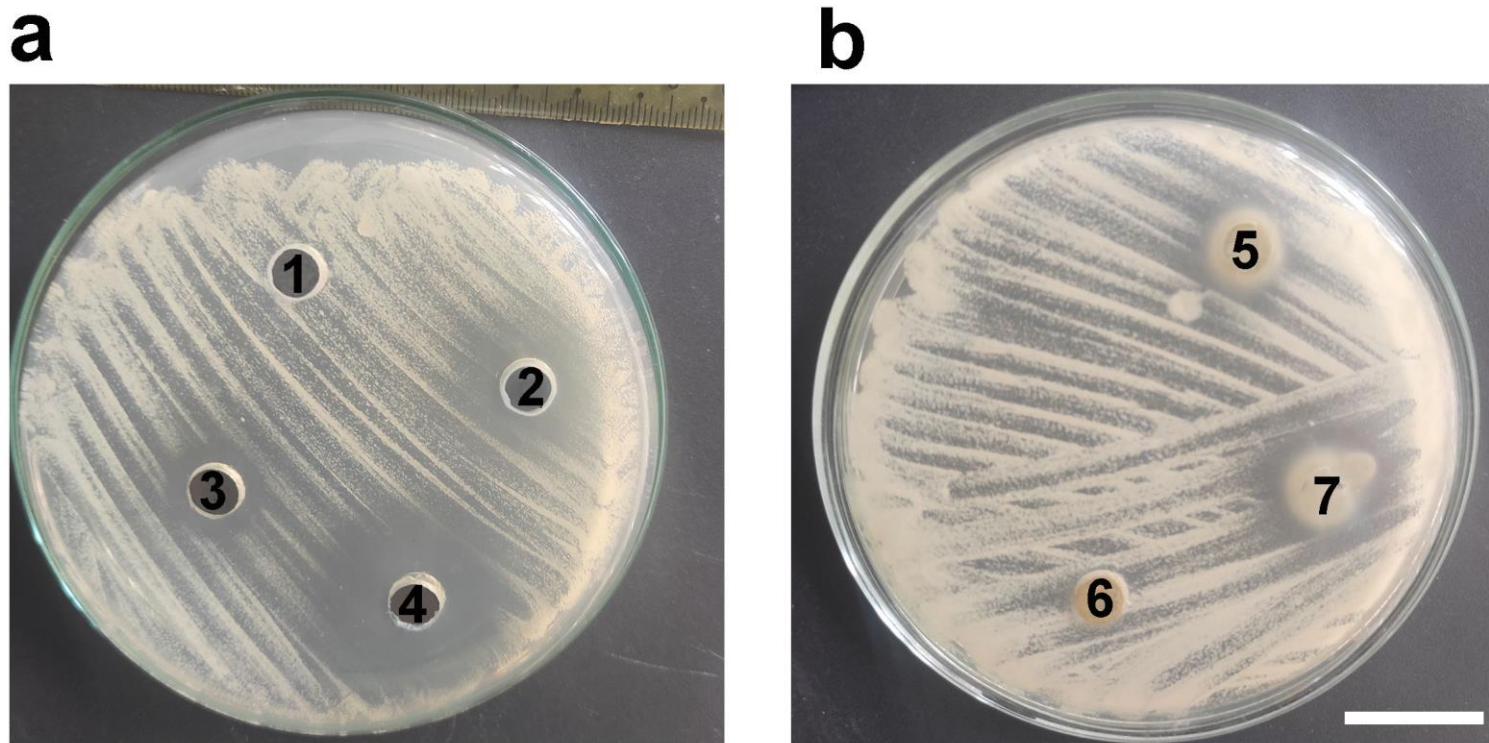


Fig. 3S Inhibition zones of different formulations on Muller-Hinton agar (a and b), corresponding to 250 μ g ATV. PG-Lip (1), ATV/PG-Lip (2), DMSO (as control) (3), ATV solution (4) on agar plate (a). ATV/PG-Lip@ink (5), Plain polymer ink (6), ATV@ink (7) on agar plate (b). Scale bar = 2 cm

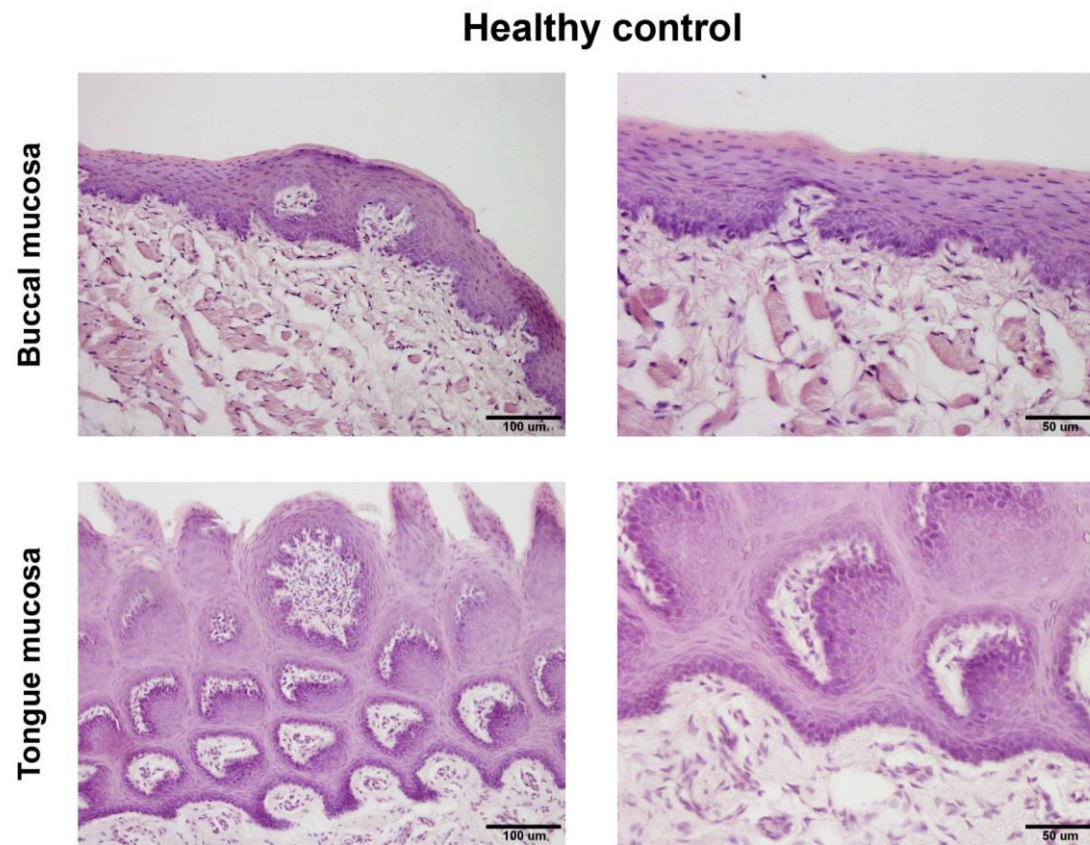


Fig. 4S A photomicrograph of PAS-stained normal rabbit buccal and tongue mucosa revealing nonkeratinized and orthokeratinized stratified squamous epithelium, respectively, without inflammatory infiltrate in their loose lamina propria. Scale bars = 100 μm ($\times 200$ magnification) and 50 μm ($\times 400$ magnification)