

Table S1: **Medians and 95% posteriors for parameter estimation in intra-macaque Simian-HIV populations.**

	$c$	$m$	$M^1$	$s$	$N\mu$
Plasma v Gut	1	1.03e-3 (5e-5,0.291)	101 (4.9,28600)	1.5 (0.71,5.31)	0.98 (0.559,1.94)
Plasma v LN <sup>1</sup>		2.67e-2 (2.85e-3,0.448)	2460 (262,41200)	0.949 (0.604,5.01)	0.92 (0.51,2.14)
Plasma v Gut	2	5.28e-4 (2.06e-5,0.0326)	15.5 (0.602,953)	3 (0.987,27.7)	0.293 (0.122,0.744)
Plasma v LN		0.0271 (1.09e-3,0.444)	573 (23,9400)	1.24 (0.783,3.19)	0.212 (0.11,0.44)
Plasma v Gut	5	5.37e-4 (1.84e-5,0.0145)	8.05 (0.276,218)	1.75 (1,15.8)	0.15 (0.103,0.296)
Plasma v LN		4.13e-2 (1.03e-3,0.447)	574 (14.4,6220)	1.52 (0.849,14.9)	0.139 (0.101,0.29)

<sup>1</sup> $M$  is a composite estimate taken from multiplying the  $m$  distribution by the point estimate of predicted population size derived from the estimated  $N\mu$  ( $M = m \times (N\mu)/\mu$ ).