

Title: A malaria transmission-blocking (+)-usnic acid derivative prevents Plasmodium zygote-to-ookinete maturation in the mosquito midgut

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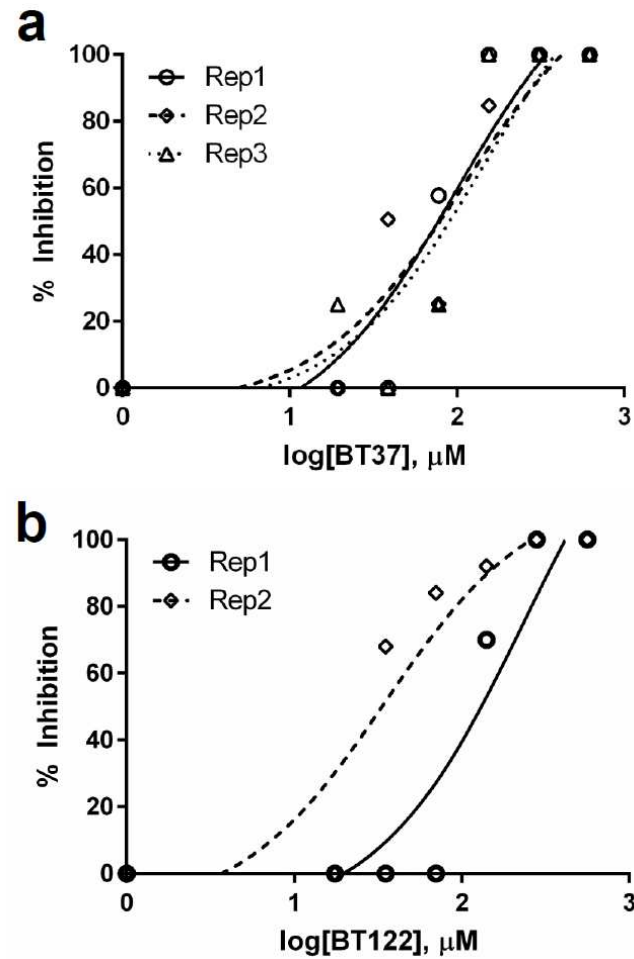


Figure S1. The 50% inhibitory concentration (IC₅₀) of UA derivatives BT37 and BT122. The IC₅₀ was determined for (a) BT37 and (b) BT122 using data from the dose-response experiments reported in Figure 2. For each compound the micromolar concentration was log transformed and percent inhibition of oocyst development was calculated as in Figure 1. To determine IC₅₀ values, a non-linear model was applied to the data as described in the Methods. The IC₅₀ for BT37 (a) ranged between 97-142 μM and the IC₅₀ for BT122 (b) ranged between 35-234 μM .

Supplemental Table S1. Analysis of Cell Viability after incubation with compounds BT-37 and BT-122 for 24 hrs and 48 hrs.

Drug	Time	RAW 264.7				L6				HepG2			
		LC ₅₀ ^a	LC ₅₀ (CI) ^b	LC ₀₅ ^c	LC ₀₅ (CI) ^d	LC ₅₀	LC ₅₀ (CI)	LC ₀₅	LC ₀₅ (CI)	LC ₅₀	LC ₅₀ (CI)	LC ₀₅	LC ₀₅ (CI)
BT37	24 H	638.2	584.3 - 711.6	107.1	74.7 - 151.5	504.9	466.0 - 553.2	55.0	39.6 - 75.3	581.4	533.0 - 644.9	80.1	56.0 - 112.5
	48 H	260.5	233.9 - 292.3	26.9	17.6 - 39.9	204.5	187.7 - 223.5	22.5	16.1 - 30.8	286.1	260.9 - 313.5	33.4	23.0 - 47.1
BT122	24 H	731.2	617.9 - 918.1	71.1	36.3 - 133.2	603.1	538.5 - 693.1	64.7	40.8 - 100.0	707.6	627.7 - 824.2	86.3	53.5 - 136.1
	48 H	331.4	296.4 - 375.0	35.0	22.0 - 53.5	279.9	257.0 - 306.5	22.6	15.9 - 31.5	326	302.3 - 353.6	27.1	19.6 - 36.8

^aLC50 is the concentration of the test compound (µg/ml) at which 50% of the cells are inviable after 24 or 48 hours. The values were estimated by non-linear regression with data from toxicity assays performed as described in the Materials and Methods.

^bLC50 (CI) is the 95% confidence interval of the LC50 estimated by non-linear regression with data from toxicity assays performed as described in the Materials and Methods.

^cLC05 is the concentration of the test compound (µg/ml) at which 5% of the cells are inviable after 24 or 48 hours. The values were estimated by non-linear regression with data from toxicity assays performed as described in the Materials and Methods.

^dLC05 (CI) is the 95% confidence interval of the LC05 estimated by non-linear regression with data from toxicity assays performed as described in the Materials and Methods.