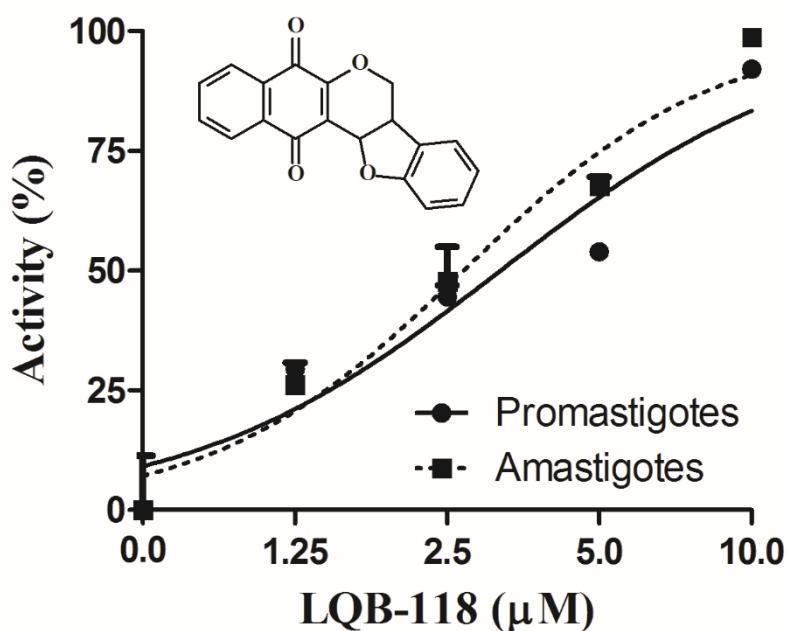
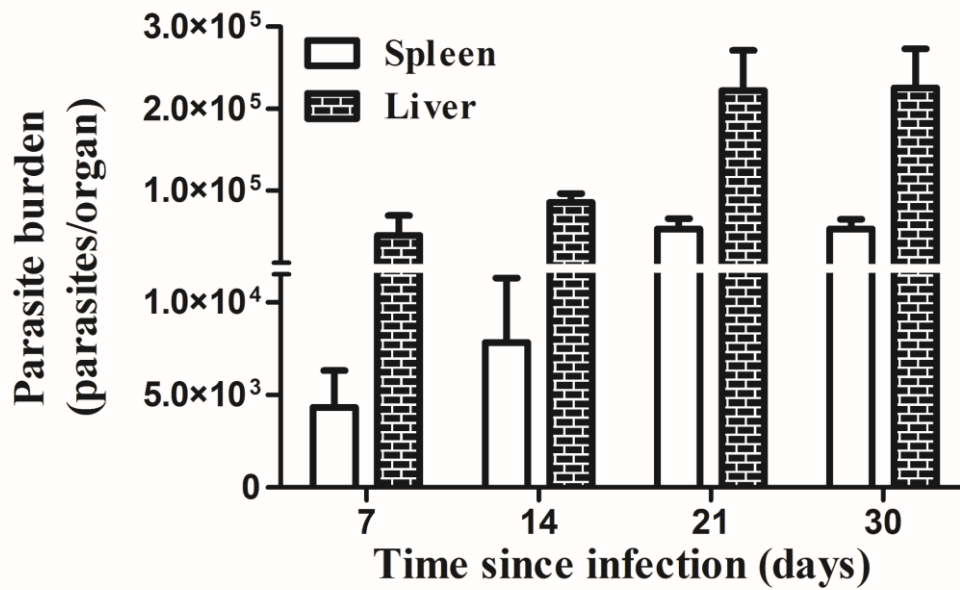


Supplemental material:



**Figure S1. *In vitro* activity.** *L. infantum* promastigotes were incubated with the LQB-118 (0-10  $\mu\text{M}$ ) for 72 h at 26°C. The parasite viability was estimated with the MTT conversion assay and expressed as a percentage relative to the control (solid line). Murine peritoneal macrophages were infected with *L. infantum* and incubated with LQB-118 (0-10  $\mu\text{M}$ ); after 72 hours, the slides were stained, and the infection index was established by counting at least 100 macrophages by light microscopy (dashed line). Trivalent and pentavalent antimonials were used as reference drugs for promastigotes and amastigotes, giving an  $\text{IC}_{50}$  of 8.2 and 81.96  $\mu\text{M}$ , respectively.



**Figure S2. The course of *L. infantum* (strain MHOM/MA67ITMAP263) infection in BALB/c mice.** Mice were inoculated intraperitoneally with  $10^8$  stationary-phase promastigotes and the liver and spleen parasite loads were evaluated weekly after infection. Visceral proliferation of amastigotes was quantified in culture via the microtitration method (defined in Materials and Methods). The results are from a representative infection experiment, and the values represent the SEM for five mice at each time point.

Supplementary Table 1. Theoretical analysis of ADMET and Lipinski's rule of five#.

	LQB-118		Doxorubicin		Atovaquone	
	<i>result</i>	<i>probability</i> (%)	<i>result</i>	<i>probability</i> (%)	<i>result</i>	<i>probability</i> (%)
<i>Absorption</i>						
BBB	+	93.59	-	99.51	+	56.25
HIA	+	100.00	-	80.92	+	100.00
Caco-2	-	55.86	-	79.90	+	62.39
<i>Metabolism</i>						
CYP450 2C9 Substrate	NS	87.24	NS	80.42	NS	79.86
CYP450 2D6 Substrate	NS	87.99	NS	91.16	NS	91.17
CYP450 3A4 Substrate	NS	59.47	S	58.88	NS	52.94
CYP450 1A2 Inhibitor	I	89.39	NI	90.45	I	91.08
CYP450 2C9 Inhibitor	I	86.19	NI	92.09	I	89.49
CYP450 2D6 Inhibitor	NI	61.52	NI	92.31	NI	92.31
CYP450 2C19 Inhibitor	I	79.11	NI	90.25	NI	90.26
CYP450 3A4 Inhibitor	I	56.89	NI	83.10	NI	83.09
<i>Toxicity</i>						
Carcinogens	-	96.04	-	95.34	-	90.67
Acute Oral Toxicity	II	41.03	III	77.66	III	32.31
Carcinogenicity (three-class)	NR	59.59	NR	62.46	NR	52.29
<i>Lipinski Molecular Descriptors</i>						

NHBA ( $\leq 10$ )	4	12	3
NHBD ( $\leq 5$ )	0	7	1
clogP ( $\leq 5$ )	3.65 $\pm$ 0.84	2.82 $\pm$ 1.3	6.18 $\pm$ 0.63
MW ( $\leq 500$ )	304.29	543.52	366.83
<i>Rule of 5 violations</i>	0	3	1

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BBB. Blood-Brain Barrier; HIA. Human Intestinal Absorption; I. Inhibitor; NI. Noninhibitor; NS. Nonsubstrate; NHBA. Number of hydrogen bond acceptors; NHBD. Number of hydrogen bond donors; clogP. Logarithm of compound partition coefficient between n-octanol and water; MW. Molecular weight; NR. Not Required.

#Lipinski's rule of five was calculated using Advanced Chemistry Development (ACD/Labs) Software V 11.02 (copyright 1994–2012 ACD/Labs).