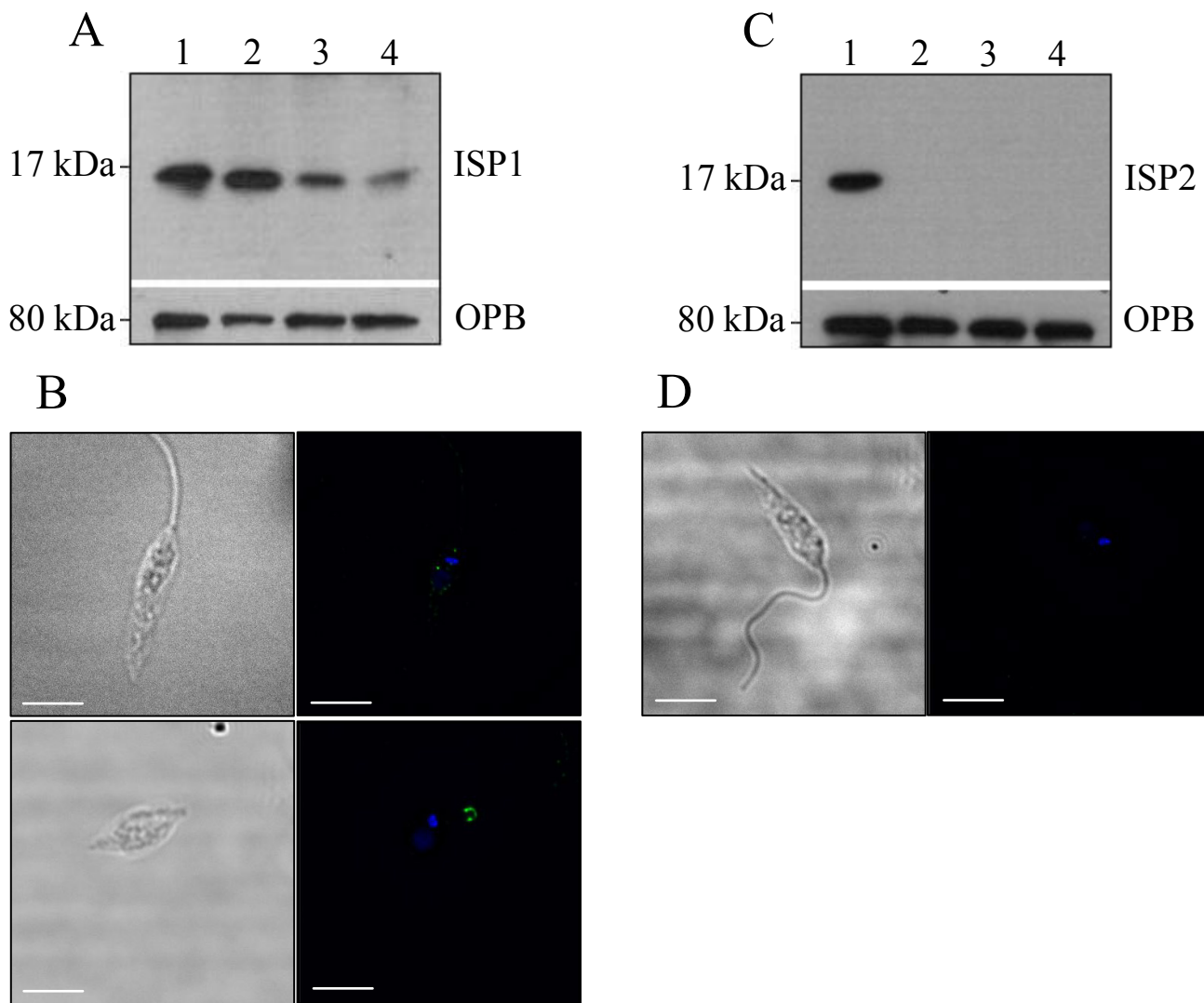


Supplementary Table 1

	A	B	C	D	E	F	G
A. WT		P<0.001	P<0.001	P<0.001	P<0.01	P<0.001	P<0.001
B. <i>Δisp1/2/3</i>	P<0.001		n/s	P<0.05	P<0.001	P<0.001	P<0.001
C. <i>Δisp1/2/3:ISP1</i>	P<0.001	n/s		n/s	P<0.001	P<0.001	P<0.001
D. <i>Δisp1/2/3:ISP2-3</i>	P<0.001	P<0.05	n/s		P<0.001	P<0.001	P<0.001
E. <i>Δisp1/2/3:ISP2-3 [pXG-ISP1]</i>	P<0.001	P<0.001	P<0.001	P<0.001		P<0.01	n/s
F. WT [<i>pXG-ISP1</i>]	P<0.001	P<0.001	P<0.001	P<0.001	P<0.01		n/s
G. WT [<i>pXG-ISP2</i>]	P<0.001	P<0.001	P<0.001	P<0.001	n/s	n/s	

Suppl. Table 1: *Δisp1/2/3* parasite populations have longer flagella and are less motile than WT populations. Statistical analysis of flagella lengths of *L. major* WT (A), *Δisp1/2/3* (B), *Δisp1/2/3:ISP1* (C), *Δisp1/2/3:ISP2-3* (D), *Δisp1/2/3:ISP2-3 [pXG-ISP1]* (E), WT [*pXG-ISP1*] (F) and WT [*pXG-ISP2*] (G), as measured by one-way ANOVA with a Tukey post-test performed in GraphPad Prism 5.

Supplementary Figure 1



Suppl. Figure 1: Western blots of cell extracts from 1×10^7 stationary phase promastigotes of WT *L. major* (Lane 1), WT *L. mexicana* (Lane 2), *L. mexicana* $\Delta pfr1$ (Lane 3) and *L. mexicana* $\Delta pfr2$ (lane 4), using purified anti-ISP1 (A) or anti-ISP2 (C) primary antibody raised in sheep. Antibodies to Oligopeptidase B (OPB) were used as loading control. Fixed WT *L. mexicana* were labelled with anti-ISP1 (B) or anti-ISP2 (D) primary antibody and donkey anti-sheep Alexa 488-secondary antibody. Nuclear and kinetoplast DNA were stained with DAPI. Left panel, DIC image. Right panel, merged image of ISP (green) and DAPI (blue). Scale bar = 5 μm .