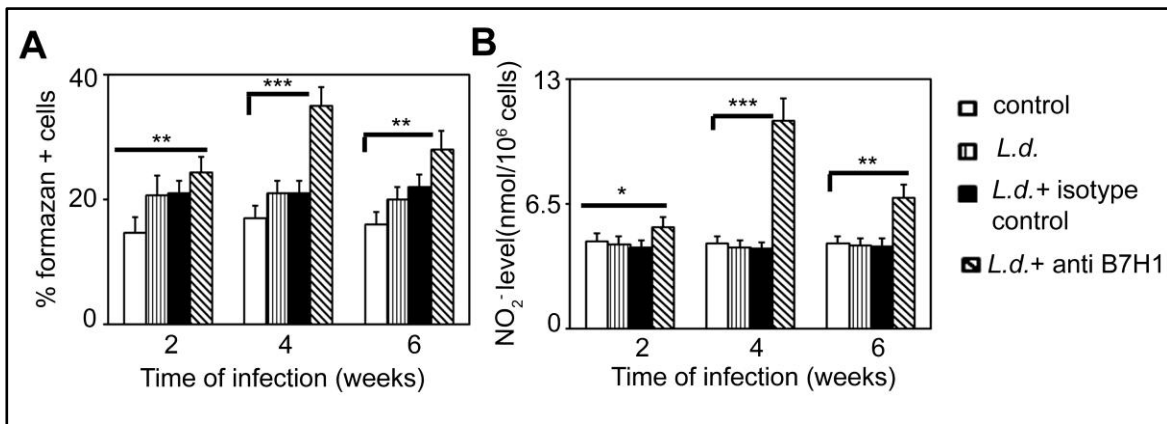
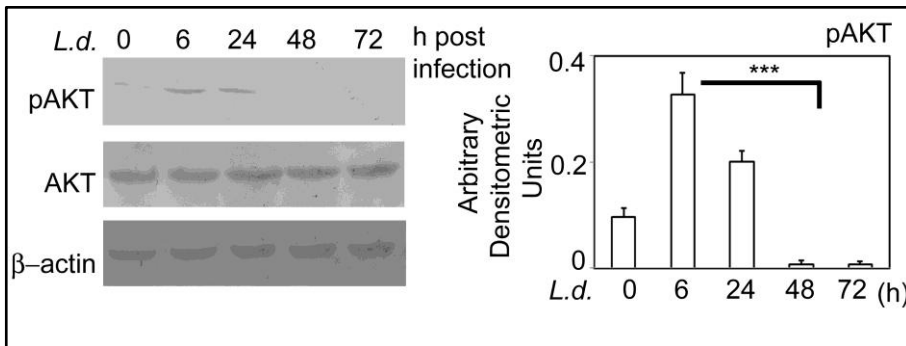


**Figure S1. Effect of *L. donovani* infection on PD-1 pathway-mediated macrophage-apoptosis.** Macrophages pretreated with anti-PD-1 or anti PD-1L antibodies were either treated with H<sub>2</sub>O<sub>2</sub> (400 μM) for 1 h or infected with *L. donovani* for 48 h. Total cellular extracts (10 μg of protein per sample) were used to determine caspase 3 activity using Ac-DEVD-pNA as substrate. Results are representative of three individual experiments and the error bars represent mean ± SD (n=3). ns-not significant, \*\*p<0.01 by Student's t-test.

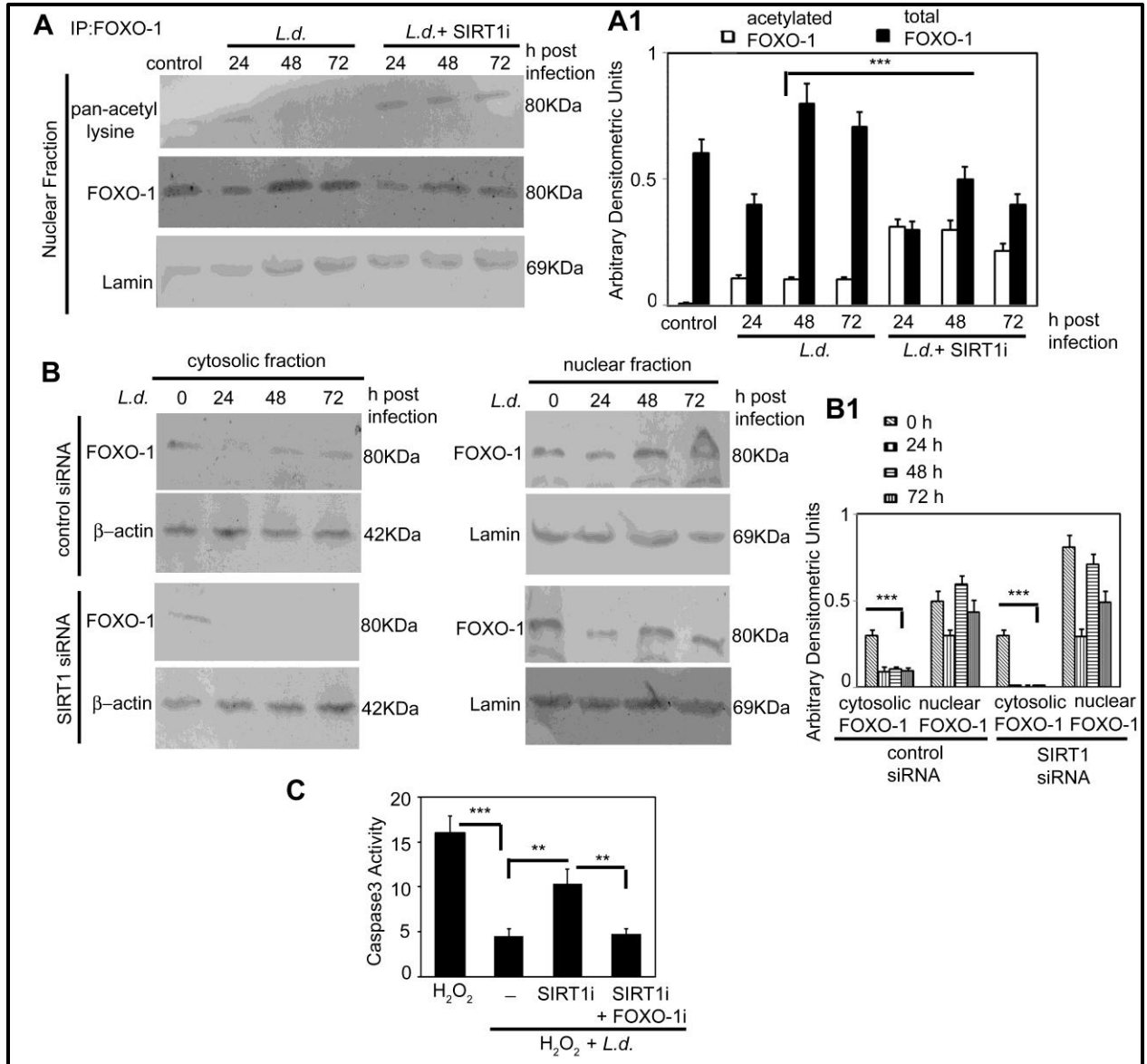


**Figure S2. Role of PD-1 on ROS and NO generation in the in vivo mouse model of *L. donovani* infection.**

A and B, Splenocytes were isolated from indicated groups of mice and superoxide content of cells was assessed by NBT assay (A) and the NO level was measured by the Griess reagent assay (B) after incubation with 5  $\mu$ g of soluble leishmanial antigen at 37<sup>o</sup>C for 48 h. Results are representative of three individual experiments and the error bars represent mean  $\pm$  SD (n=3). \*p<0.05, \*\*p<0.01, \*\*\*p < 0.001 by Student's t-test.



**Figure S3. Effect of *L. donovani* infection on AKT.** Macrophages were infected with *L. donovani* for the indicated time periods and levels of phosphorylated AKT (pAKT) and total AKT were monitored by western blotting. Bands were analyzed densitometrically and bar graphs expressing arbitrary densitometric units are presented adjacent to corresponding western blots. Results are representative of three individual experiments and the error bars represent mean  $\pm$  SD (n=3). \*\*\*p < 0.001 by Student's t-test.



**Figure S4. The role of SIRT1-mediated deacetylation of FOXO-1 on apoptosis.** A, Cells were treated with sirtinol (50  $\mu$ M) followed by infection with *L. donovani* promastigotes for indicated time periods. Nuclear lysates prepared from infected cells were immunoprecipitated with anti-FOXO-1 antibody and then subjected to immunoblot with pan-acetyl lysine antibody. B, Cells were transfected with control or SIRT1 siRNA followed by infection with *L. donovani* promastigotes for indicated time periods. Nuclear and cytosolic fractions were isolated and then expressions of FOXO-1 were analyzed by western blotting. C, Macrophages were treated with sirtinol (50  $\mu$ M) alone or with FOXO-1 inhibitor (50 nM) followed by infection with *L. donovani* promastigotes for 48 h and treated with  $H_2O_2$  (400  $\mu$ M) for 1 h. Cells were washed and incubated overnight at 37°C. Total cellular extracts (10  $\mu$ g of protein per sample) were used to determine caspase 3 activity using Ac-DEVD-pNA as substrate. Bands were analyzed densitometrically and bar graphs expressing arbitrary densitometric units are presented adjacent to corresponding western blots. Results are representative of three individual experiments and the error bars represent mean  $\pm$  SD (n=3).\*\*p<0.01, \*\*\*p < 0.001 by Student's t-test.