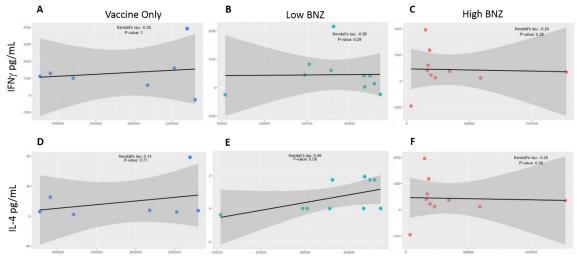
**Supplemental Table 1:** Treatment groups. Mice were randomly assigned in groups of 10 to each of the 4 treatment groups or the infected untreated group.

Group	Antigen	Adjuvant	Benznidazole
Infected Untreated	None	None	None
Vaccine Only	25µg Tc24 C4	5µg E6020 SE	None
Low BNZ	None	None	25mg/kg
<b>Combination Treatment</b>	25µg Tc24 C4	5µg E6020 SE	25mg/kg
High BNZ	None	None	100 mg/kg

**Supplemental Figure 1**: Correlation analysis for cytokines and parasitemia. Correlation analysis was performed to evaluate associations between antigen specific IFN $\gamma$  and IL-4 release and parasitemia as a measure of efficacy. Negative and positive association was considered for alternative hypothesis. P values less than or equal to 0.05 were considered significant. There were no statistically significant correlations between IFN  $\gamma$  and parasitemia for the vaccine only (Panel A), low BNZ (Panel B) or High BNZ (Panel C) groups. There were also no statistically significant correlations between IL-4 and parasitemia for the vaccine only (Panel E) or High BNZ (Panel F) groups.



Parasite equivalents/mL blood

Supplemental Figure 2: Correlation analysis for cytokines and cardiac parasite burdens.

Correlation analysis was performed to evaluate associations between antigen specific IFN $\gamma$  and IL-4 release and parasitemia as a measure of efficacy. Negative and positive association was considered for alternative hypothesis. P values less than or equal to 0.05 were considered significant. There were no statistically significant correlations between IFN  $\gamma$  and cardiac parasite burdens for the vaccine only (Panel A), low BNZ (Panel B) or High BNZ (Panel C) groups. There were also no statistically significant correlations between IL-4 and cardiac parasite burdens for the vaccine only (Panel D), low BNZ (Panel E) or High BNZ (Panel F) groups.

