Supplementary figure legends

Figure S1. Granulocytes are highly recruited in livers of *S. mansoni* infected mice. *Wt* (C57BL/6) mice (n=5) were infected with app. 50-60 cercariae at week 0. Twelve-weeks post infection, livers were harvested and single cell suspensions prepared by collagenase (1mg/ml) digestion. Single cells suspensions were surface stained with fluorescent conjugated antibody against surface maker CD11b. Cells were acquired on BD LSRII flow cytometer and data were anaysed using Flowjo software (Tree Star Inc.).

Fig.S2. Macrophages and eosinophils in the livers of *S mansoni* infected mice are alternatively activated. Flowcytometry gating strategy to determine expression of Relmα (alternative activation marker) by liver granulocytes. As described in Fig.6, using surface staining for respective (CD11b, F4/80, SiglecF and Gr1) markers various cell populations (macrophages, eosinophils and neutrophils) were identified in the single cell suspensions obtained from livers of infected *wt* and *Cd14-/-* mice. A) From the live cells, $CD11b^+$ population was gated, which were further analyzed for Gr1 expression to separate out neutrophils (1). Relmα (red peak) or isotype (blue peak) expression in the neutrophil population was analyzed. B) $CD11b^+F4/80^+$ cells were further analyzed for siglecF expression to gate eosinophil ($SiglecF^+$) and macrophage ($SiglecF^{-/low}$) populations as indicated. Eosinophil (2) and macrophage (3) populations were further analyzed for Relmα expression. Blue peaks indicate isotype control. C) To validate macrophages (3) and eosinophils (2) display different scatter profiles, $CD11b^+F4/80^+SiglecF^+$ and $CD11b^+F4/80^+SiglecF^-$ cells were gated for their size and granularity using SSC/FSC plots. D) Eosinophils can also be identified by directly gating for $CD11b^+SiglecF^+$ cells. $CD11b^+$

cells (from Fig. S2A), were analyzed for SiglecF expression to identify eosinophils (2). $CD11b^+SglecF^+$ cells were also analyzed for SSC/FSC profile.

Figure S3. BMDCs lacking CD14 expression drives increased Th2 response. BMDCs on day 6 were incubated with 20μg/ml soluble egg antigen (SEA) for 48 hrs. Cells were washed and incubated with MACS purified naïve $CD4^+$ T-cells isolated from OT-II mice at 1:10 ratio with 3μg/ml OVA peptide. Supernatants were harvested after 72 hrs of incubation and ELISA was performed to measure the production of IL-4 in culture supernatants. Statistical significance was calculated using One-way Anova Turkey's Multiple Comparison Test. **;p<0.01. Results represent at least 2 independent experiments.

Figure S4 *S. mansoni* infected *Cd14*$^{-/-}$ mice have enhanced Th2 responses. Splenocytes were prepared from naïve and *S. mansoni* (Sm) infected (12 weeks) wild-type C57BL/6 (n=5) and *Cd14*$^{-/-}$ mice (n=5). Cells were then surface stained with antibodies to CD4 and intracellular cytokines IL-4 (A) and IL-13 (B) and analyzed by flow cytometer. Total $CD4^+$ T-cell specific cytokines (IL-4, IL-13) or regulatory T-cells ($CD4^+FoxP3^+$) (C) as indicated, were determined using total live cell and splenocyte counts from each mouse. Statistical significance was calculated using One-way Anova Turkey's Multiple Comparison Test. *, p<0.05; **, p<0.01; ns=not significant. Results (Mean SEM) represent 3 or more independent experiments.

Fig. S5 Macrophages are the major source of CD14 expression in livers of *S. mansoni* infected mice. Single cell suspensions from livers of infected mice (12 weeks) were processed for surface staining as described in Fig. 6. Briefly, to determine expression of CD14 by macrophage, eosinophil and neutrophil populations, $CD11b^+$ cells were gated for

CD14 positive population. Open histograms/peaks show expression of F4/80, SiglecF and Gr1 by $CD11b^{+}CD14^{+}$ cells compared (overlay) to the neutrophil (1), eosinophil (2) and macrophage (3) populations (filled histograms) gated from $CD11b^{+}$ cells as described in Fig.S2A.

Fig. S6 Macrophages in the lungs of *S mansoni* egg injected mice are alternatively activated. Gating strategy to identify macrophage and eosinophil populations to determine Relmα expression. Single cell suspension from lungs of mice injected with *S. mansoni* eggs and naïve peritoneal macrophages were stained for surface markers CD11c, F4/80 and siglecF as well as intracellular marker Relmα. Live cells were analyzed for CD11c and F480 expression. The $CD11c^{(hi)}F480^{+}$ population represents macrophages, while $CD11c^{(low)}F480^{+}$ represents eosinophils. A) Both macrophage and eosinophil populations were further validated by measuring SiglecF expression. B) Alternative activation of macrophages were measured by determining Relmα expression in macrophages ($CD11c^{(hi)}F480^{+}$ cells).

Supplementary data

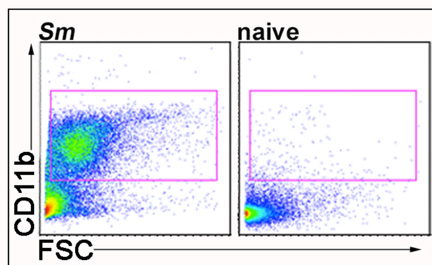


Fig. S1

Liver

A

Live/Dead

CD11b

FSC

CD11b⁺

Neuts

1

Gr1

F4/80

Relm-alpha

B

CD11b⁺F4/80⁺

3

2

Macs

Eos

CD11b

Siglec F

CD11b⁺F4/80⁺SiglecF^{hi}

Relm-alpha

CD11b⁺F4/80⁺ SiglecF^{low}

Relm-alpha

C

1

Macs

2

Eos

SSC

FSC

D

CD11b⁺

2

CD11b

Siglec F

Fig. S2

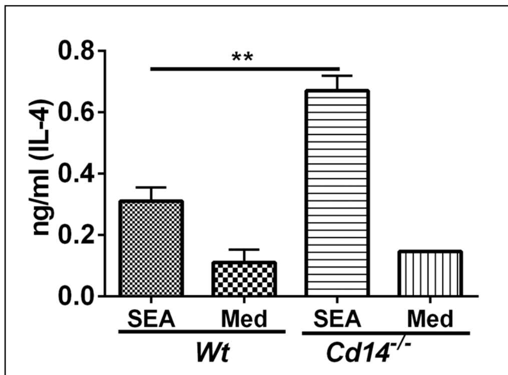


Fig. S3

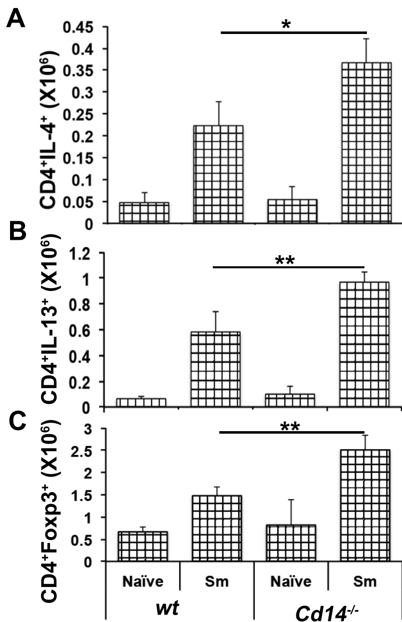
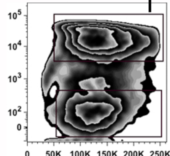
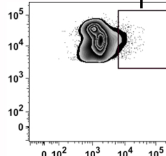


Fig. S4

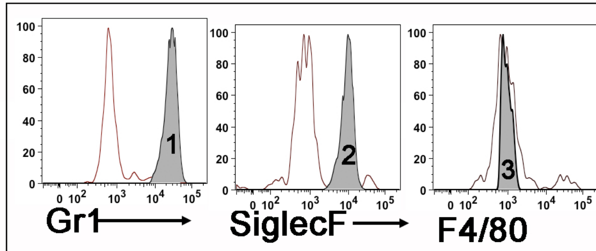
Live/Dead



CD11b+



CD11b+CD14+



Open peak in each panel = $CD11b^+CD14^+$

Filled peak 1 = Neut ($CD11b^+F4/80^-Gr1^+$)

Filled peak 2 = Eos ($CD11b^+F4/80^+SiglecF^+$)

Filled peak 3 = Macs ($CD11b^+F4/80^+SiglecF^-$)

Fig. S5

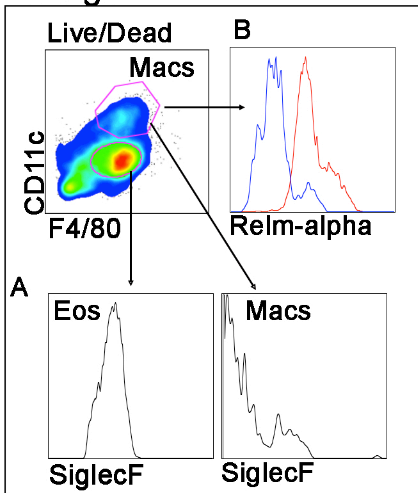


Fig. S6