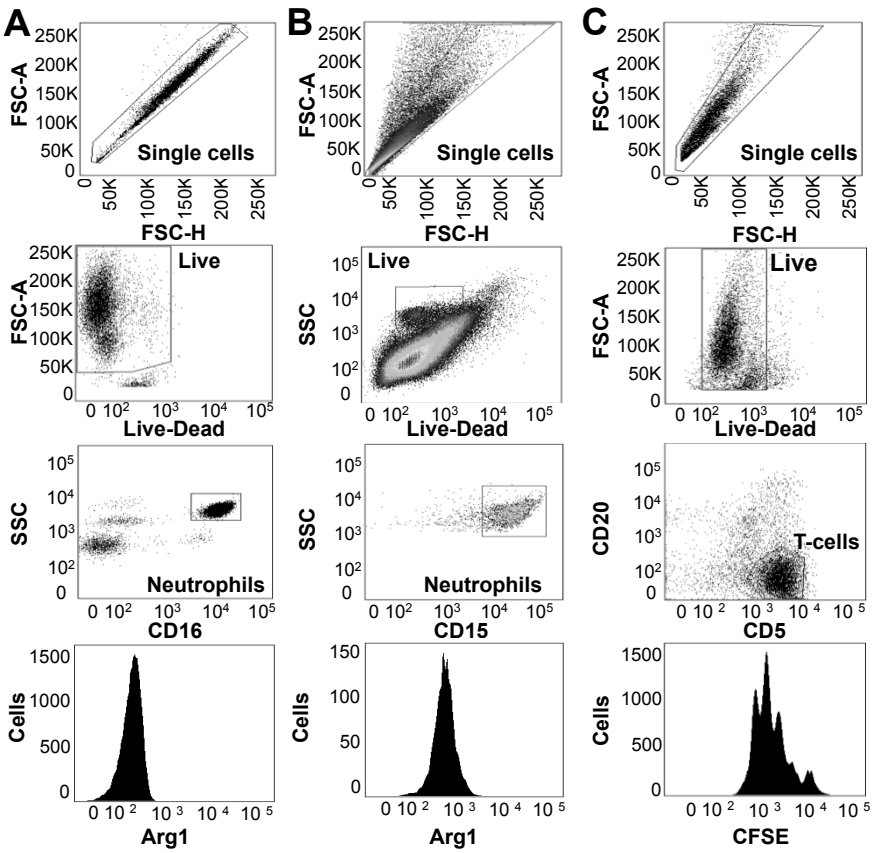
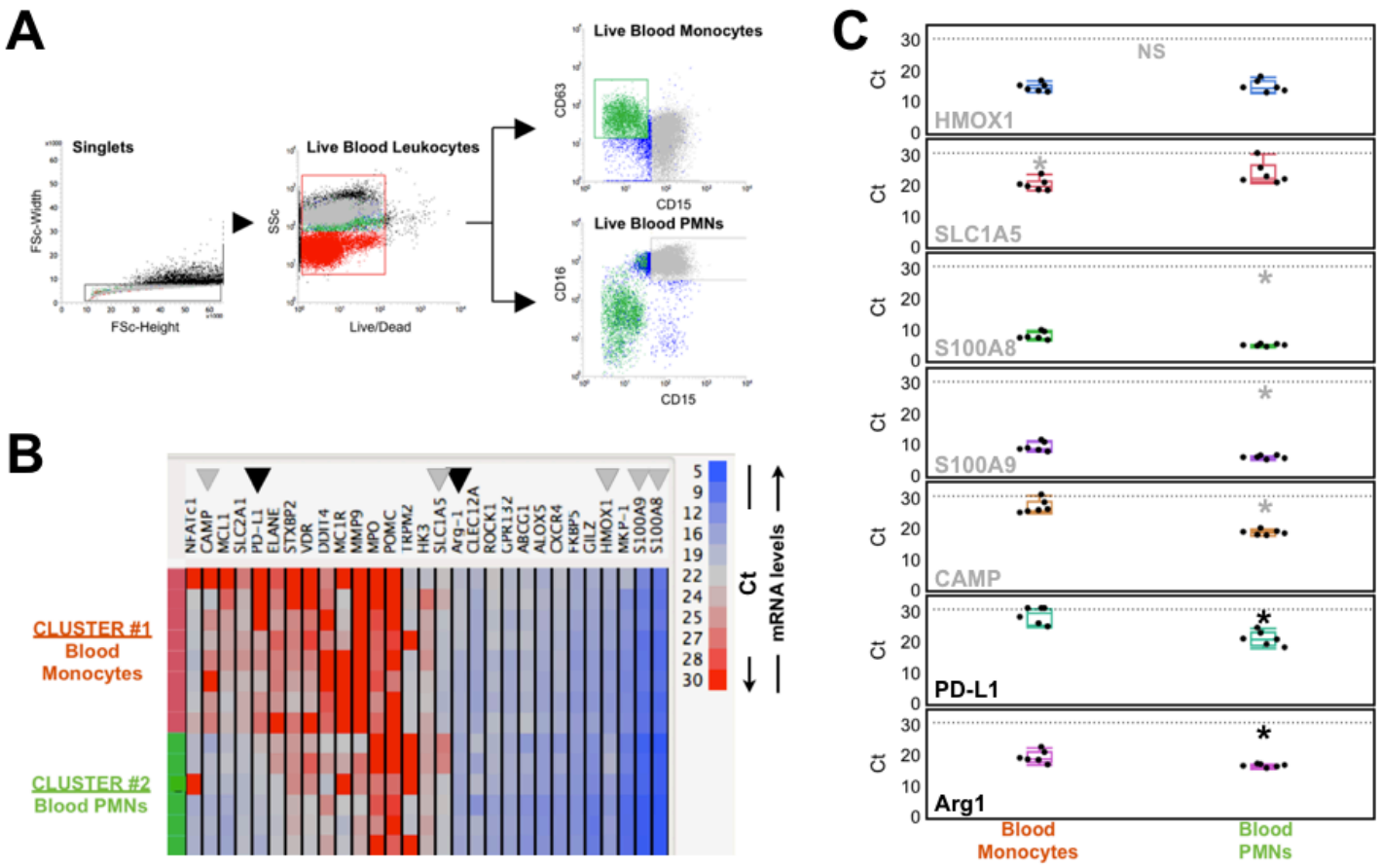
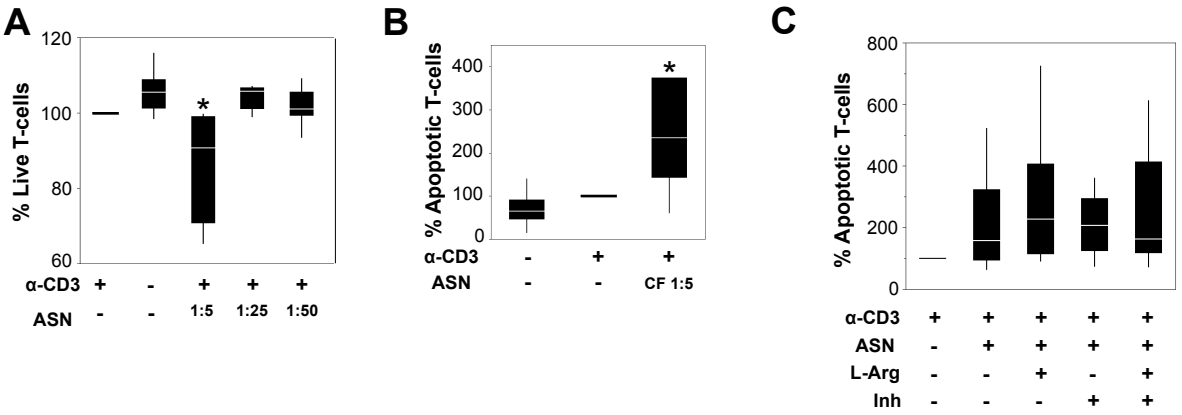


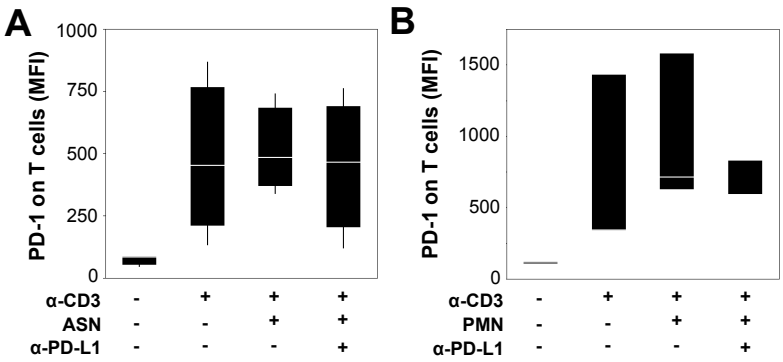

**Supplemental Figure S1. Gating strategies.** Live PMNs from blood **(A)** or sputum **(B)** were gated based on their scatter properties, low expression of Live/Dead and high CD16 (blood) or CD15 (sputum) expression. Eosinophils were excluded based on low CD16 expression (blood) and high CD45 expression (sputum). Live T cells were gated based on their low expression of Live/Dead, high CD5 and lack of CD20 expression **(C)**.




**Supplemental Figure S2. Fluidigm profiling of sorted blood PMNs and monocytes. (A)** Live PMNs and monocytes were sorted from blood (N=6) according to a 3-step gating gating strategy. **(B)** Upon analysis of Fluidigm multiplexed qPCR data, samples naturally parsed into clusters, representing blood monocytes and blood PMNs. . Color scale is indicated on the right. Note that low threshold cycle (Ct) indicate high mRNA abundance (blue), while high Ct indicate low mRNA abundance (red). Arrowheads represent transcripts that are further detailed in C (PD-L1 and ARg1 in black). **(C**) Box plots representing HMOX1, SLC1A5, S100A8, S100A9, CAMP, PDL-1 and Arg1 data. Note that HMOX1 is equally expressed in the two subsets, while SLC1A5 is higher in monocytes (lower Ct than in PMNs) and CAMP, S100A8, S100A9, as well as PD-L1 and Arg1 mRNA levels are higher in PMNs (lower Ct than in monocytes). Dotted lines indicate lower detection levels. * indicate P<0.02 per Wilcoxon signed-rank test for paired monocyte/PMN fractions (N=6). NS, not significant.




**Supplemental Figure S3. CF ASN at high concentration reduces T-cell viability via induction of apoptosis, which is not rescued by arginase inhibition / arginine supplementation. (A)** PBMCs were pre-treated with RPMI or CF ASN at indicated concentrations for 2 hours and plated on control plates or anti-CD3-coated plates for 96 hours. Percentage of viable T-cells was determined by Live/Dead staining, showing a reduction in T-cell viability at 1:5, but not 1:25 and 1:50, CF ASN concentration. **(B)** To assess whether 1:5 CF ASN reduced T-cell viability by inducing apoptosis, PBMCs were cultured on control plates or anti-CD3-coated plates for 48 hours and treated with 1:5 CF ASN. Percentage of apoptotic T-cells was determined by Annexin V staining, showing an induction of T-cell apoptosis at 1:5 CF ASN concentration. * represents $p < 0.05$ when compared to CD3-stimulated cells in RPMI. **(C)** PBMCs were cultured on control plates or anti-CD3-coated plates for 48 hours then treated with 1:5 ASN with or without L-Arginine +/- Arg inhibitor, as indicated. After 24 hours, PBMCs were collected and stained with Annexin V and Live/Dead. The values represent the percent change compared to the control CD3-stimulated untreated PBMCs, where n = 7 experiments.




**Supplemental Figure S4. PD-1 expression on T cells.** PBMCs were cultured on control plates or anti-CD3-coated plates for 48 hours then treated with 1:50 ASN **(A)** or $2x10^5$ CF airway PMNs **(B)**, in the absence or presence of anti-PD-L1 antibody. After 24 hours, PBMCs were collected and stained for flow cytometry. The median fluorescence intensities of PD-1 surface expression are presented as box plots (n=3-4 independent experiments). PD-1 was assessed by using a PD-1 antibody (EH12.2H7) from Biolegend.