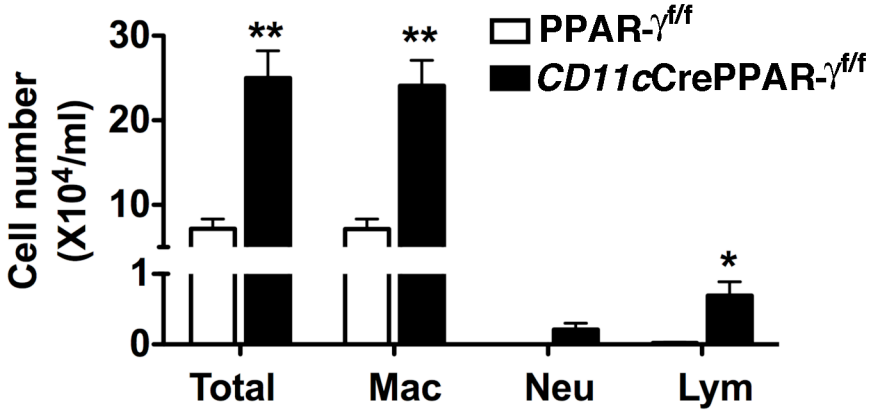

Figure S1. Increased inflammatory cells infiltration in 2-month old PPAR-γ deficient mice.

Numbers of total cells, macrophages (Mac), lymphocytes (Lymph) and neutrophils (Neu) in BAL fluid from 2-month old PPAR-γ $^{f/f}$ and *CD11c*CrePPAR-γ$^{f/f}$ mice (n=5 in each group). Data are mean±s.e.m. **P<0.01, *P<0.05 as determined by One-way ANOVA and Bonferroni's Multiple Comparison test.

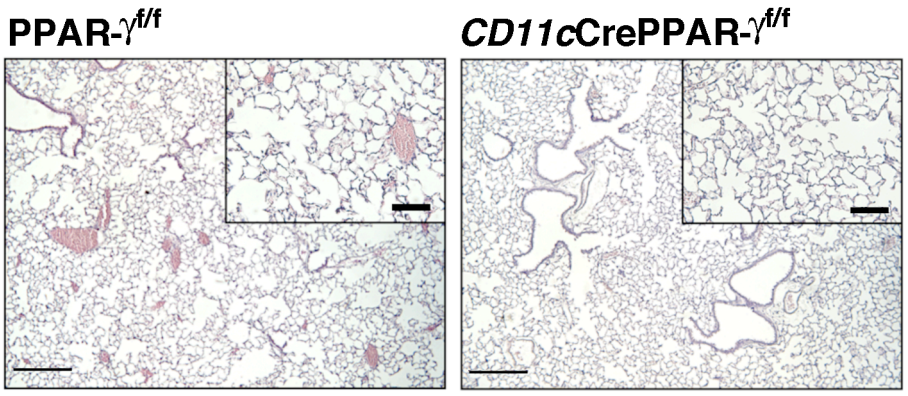

Figure S2. Normal lung development in 2-month old PPAR-γ deficient mice

Hematoxylin and eosin (H&E) staining of formalin fixed 5μm lung sections showing normal lung development and no airway enlargement in 2- month old PPAR-γ $^{f/f}$ and *CD11c*CrePPAR-γ$^{f/f}$ mice. Data are representative of two independent studies with n=5 in each group. Scale bars: Bottom left 400μm; insets100μm.

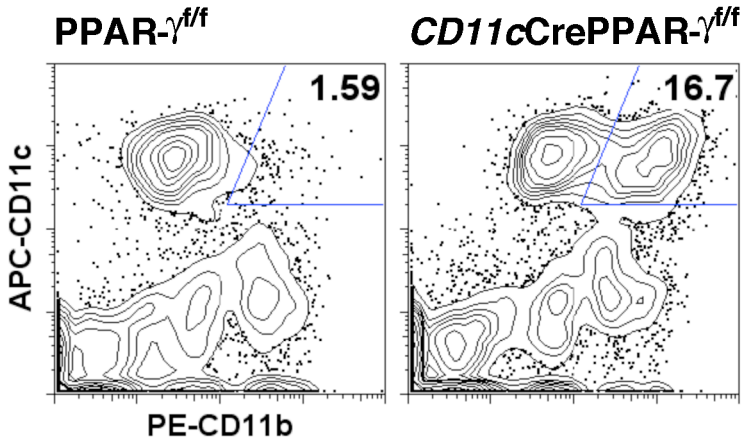

Figure S3. Increased lung myeloid DCs infiltration in PPAR-γ deficient mice

Flow cytometery analysis of alveolar macrophage and myeloid DCs in 5-6 months old PPAR-$\gamma^{f/f}$ and *CD11c*CrePPAR-$\gamma^{f/f}$ mice. Increased relative expression of CD11b/CD11c is shown in the top right quadrant. One representative figure of at least five mice each group is shown.

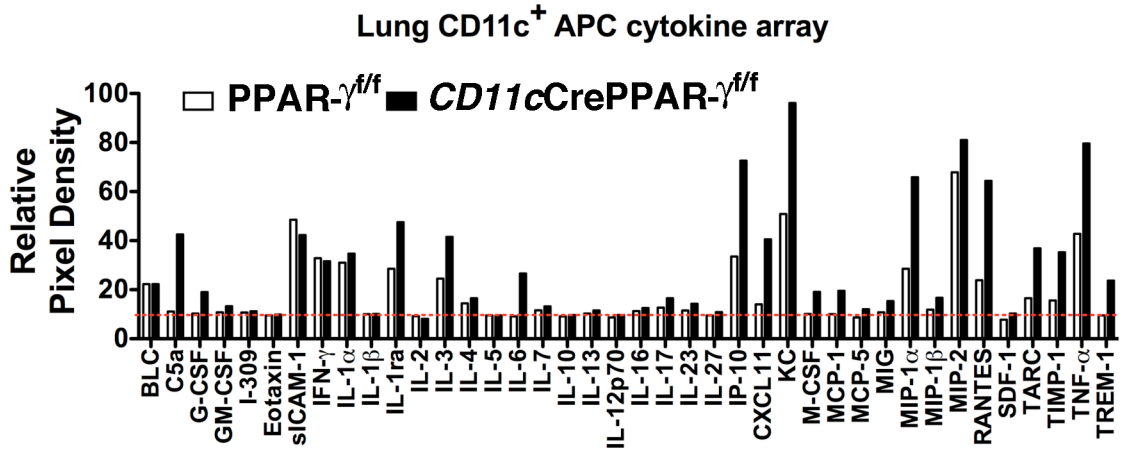

Figure S4. Increase chemokine production by PPAR-γ deficient APCs

Lung CD11c^{+} APCs isolated from 5-6 months old PPAR-γ $^{f/f}$ and *CD11c*CrePPAR-γ$^{f/f}$ mice were stimulated with (500ng/ml) LPS overnight. Relative production cytokines and chemokines were measured with mouse cytokine antibody array kit under manufacturer's instructions (Panel A, ARY006 R&D). The red dotted line represents background pixel density extracted from blot-based array assay. Data represent average of duplicate wells.

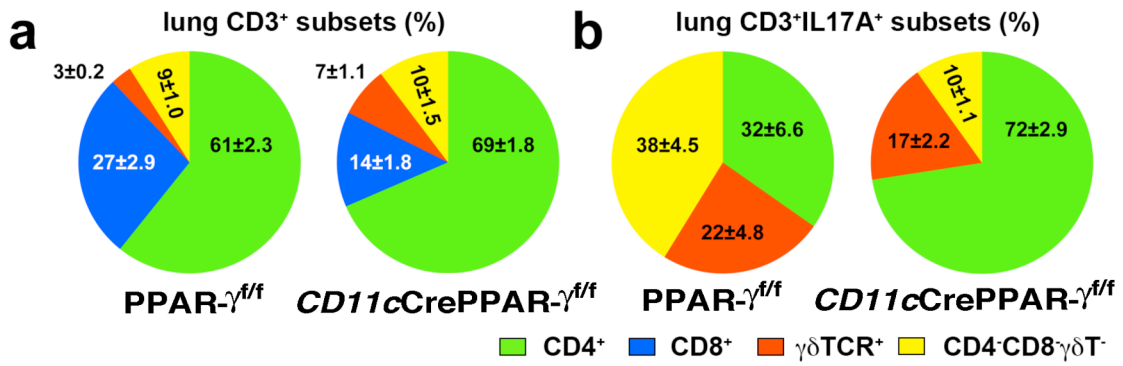

Figure S5 Analysis of different T subsets and their contribution of IL-17A production

(a) Pie graph showing the percentage of different CD3+ T cell subsets from 5-6 months old PPAR-$\gamma^{f/f}$ and *CD11c*CrePPAR-$\gamma^{f/f}$ mice. Percentage was determined by flowcytometry. Data shown are mean±s.e.m. Data represent two independent studies (n=4 in each group per study). (b) Pie graph showing the contribution of IL-17A from different CD3+ T cell subsets from PPAR-$\gamma^{f/f}$ and *CD11c*CrePPAR-$\gamma^{f/f}$ mice. Majority of IL-17A comes from CD4 T cells (Th17). Percentage was determined by flowcytometry. Data shown are mean±s.e.m. Data represent two independent studies (n=4 in each group per study).

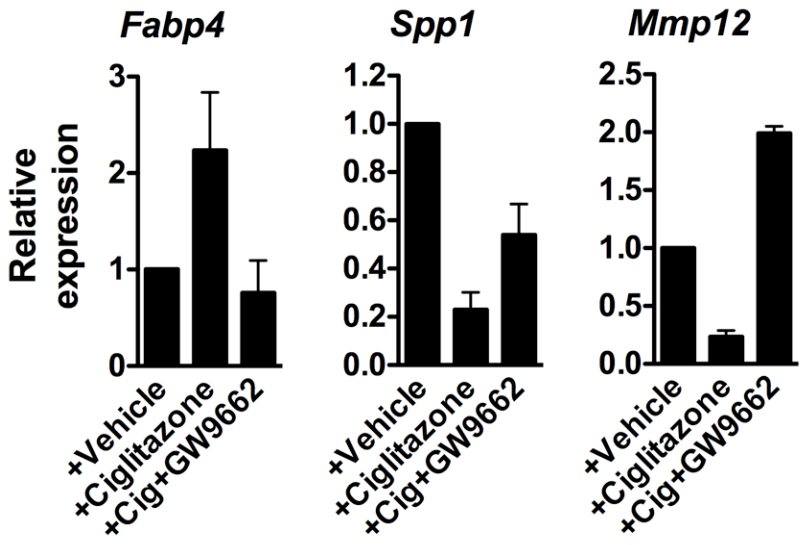

Figure S6. PPARγ agonist treatment reverse Spp1 expression in mouse emphysematous APCs.

Lung APCs from smoke exposed mice were treated with vehicle (0.1%DMSO), ciglitazone (10μM) or ciglitazone+GW9662 (10μm) overnight. Expression of Fabp4 (positive control) and Spp1 were detected by quantitative PCR. (n=4).

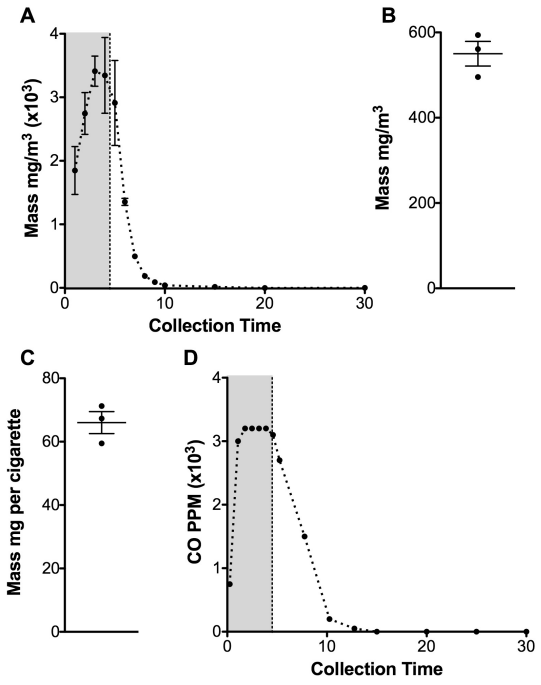

Figure S7. Smoke chamber analyses of particulate matter and carbon monoxide during 30-minute smoke cycles of 1 cigarette.

A) average gravimetric concentrations of particulates at indicated times in mg/m^3 per cubic meter. B) Mean total particulate concentration of three 30-minute exposures was 550± 50 mg/m^3 (±SD). C) Extrapolated mg/cigarette exposure based on sampling rate and total chamber flow rate. A-C data represent means ±SEM of 3 cigarettes. D) CO concentration in parts per million (ppm, v/v) during one 30-minute smoke cycle experiment; average for entire run was 757 ppm. Panels A, D: gray shading indicates time in which the cigarette is burning, 4.5 to 5 minutes total.

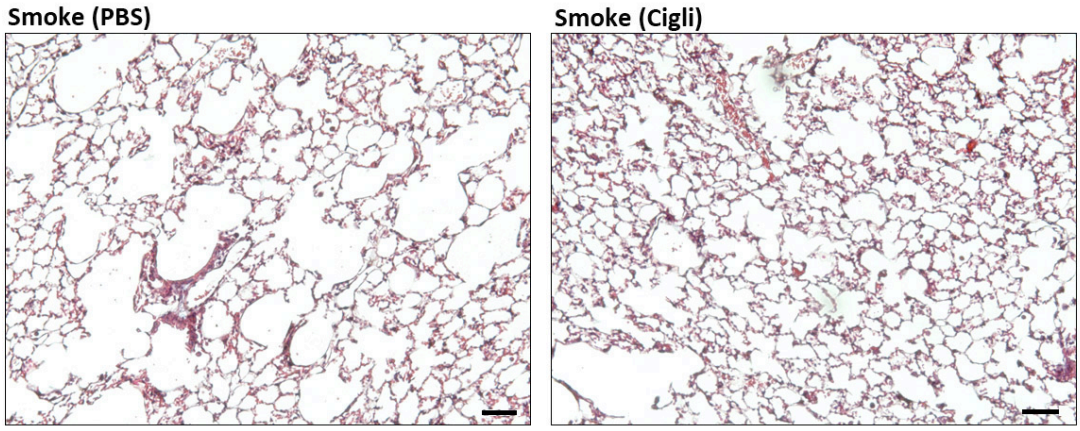

Figure S8. Ciglitazone treatment in mice exposed to smoke does not induce fibrosis. Lung sections from WT (C57/BL6J) mice exposed to smoke and treated with vehicle (PBS) or ciglitazone (66.67 μg/ml) were stained using Mason-trichrome (Sigma) to detect collagen deposition and fibrosis. Compared to control mice (smoke/PBS), there was no evidence for increased collagen deposition, or fibrosis in the lungs of mice treated with ciglitazone (smoke/cigli). Data is representative of three independent studies that show similar results. Scale bar: 50μm.

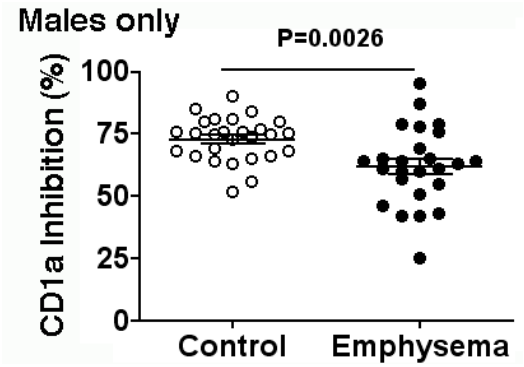

Figure S9. The difference in CD1a inhibition in male smokers with and without emphysema. Human monocytes were isolated from PBMC and cultured for three days with human GM-CSF and human IL-4 in complete medium containing 10% FBS to induce DC differentiation. Cell culture was supplemented with 10% human plasma from male control (N=17) or smokers with emphysema (N=14). Percent CD1a inhibition was calculated using the formula: Inhibition (%)=(V-P)/V, where V represents percentage of CD1a in Vehicle treated group and P represents percentage of CD1a in plasma treated group. *P=0.0026 as determined by the Mann-Whitney test.

Characteristics	Control	Emphysema
No. (male)	35 (17)	35(27)
Age (mean±SD)	58±11	65±7
%Low attenuation area (LAA)	3.1±2	21.3±11
Lung Function		
%FEV1(mean±SD)	101±14	64±19
GOLD stages	0	I-IV
Smoking Status (No.)		
Former	20	21
Current	15	14
PPY (mean±SD)	41±38	64±32

Table S1 Demographics of study participants.

No., number; SD, Standard Deviation; % LAA: low attenuation area or emphysema; %FEV1, Forced Expiratory Volume in 1 second % predicted; GOLD, Global initiative Obstructive Lung Disease; PPY, pack per year or the number of packs of cigarette smoked per day multiplied by the number of smoking in years.