

Table S1 Frequency analysis of herbal medicines

AECOPD (70 studies)			SCOPD (66 studies)		Mixed COPD (18 studies)	
No.	Herbs	Freq. %	Herbs	Freq. %	Herbs	Freq. %
1	Radix Scutellariae (Huang Qin)	45.7	Radix Astragali (Huang Qi)	60.6	Radix Glycyrrhizae (Gan Cao)	55.6
2	Rhizoma Pinelliae (Ban Xia)	32.9	Rhizoma Atractylodis Macrocephalae (Bai Zhu)	48.5	Radix Salviae Miltiorrhizae (Dan Shen)	50.0
3	Radix Glycyrrhizae (Gan Cao)	28.6	Poria (Fu Ling)	34.8	Poria (Fu Ling)	50.0
4	Semen Armeniacae Amarum (Xin Ren)	28.6	Fructus Schisandrae (Wu Wei Zi)	33.3	Pericarpium Citri Reticulatae (Chen Pi)	44.4
5	Fructus Trichosanthis (Gua Lou)	28.6	Radix Ginseng (Ren Shen)	31.8	Radix Ginseng (Ren Shen)	44.4
6	Fructus Perillae (Zi Su Zi)	27.1	Pericarpium Citri Reticulatae (Chen Pi)	27.3	Herba Ephedrae (Ma Huang)	38.9
7	Semen Lepidii (Ting Li Zi)	27.1	Radix Glycyrrhizae (Gan Cao)	27.3	Radix Scutellariae (Huang Qin)	33.3
8	Semen Perisicae (Tao Ren)	25.7	Radix Salviae Miltiorrhizae (Dan Shen)	25.8	Rhizoma Pinelliae (Ban Xia)	33.3
9	Radix Astragali (Huang Qi)	22.9	Rhizoma Pinelliae (Ban Xia)	21.2	Rhizoma Atractylodis Macrocephalae (Bai Zhu)	33.3
10	Radix Salviae Miltiorrhizae (Dan Shen)	21.4	Semen Armeniacae Amarum (Xin Ren)	21.2	Semen Armeniacae Amarum (Xin Ren)	33.3
11	Herba Ephedrae (Ma Huang)	20.0	Cornus officinalis (Shan Zhu Yu)	21.2	Radix Astragali (Huang Qi)	27.8
12	Pericarpium Citri Reticulatae (Chen Pi)	20.0	Cekko gecko Linnaeus (Ge Jie)	18.2	Semen Perisicae (Tao Ren)	22.2
13	Poria (Fu Ling)	20.0	Fructus Perillae (Zi Su Zi)	18.2	Fructus Schisandrae (Wu Wei Zi)	22.2
14	Lumbricus (Di Long)	18.6	Radix Codonopsis (Dang Shen)	16.7	Fructus Perillae (Zi Su Zi)	22.2
15	Radix Platycodi (Jie Geng)	18.6	Semen Sinapis Albae (Bai Jie Zi)	16.7		
16	Houttuynia cordata Thunb (Yu Xing Cao)	18.6	Epimedium brevicornum (Yin Yang Huo)	16.7		

Table S2 Baseline of included studies

Outcomes	No. of Studies	Heterogeneity	Overall effect
<i>Pulmonary function</i>			
FEV ₁	9	P=1.00; I ² = 0%	Z=0.00 (P=1.00)
FEV%	11	P=0.99; I ² = 0%	Z=1.13 (P=0.26)
FVC	7	P=0.94; I ² = 0%	Z=0.81 (P=0.42)
FEV ₁ /FVC	6	P=0.72; I ² = 0%	Z=0.61 (P=0.54)
<i>Arterial blood gas</i>			
PaO ₂	5	P=0.93; I ² = 0%	Z=0.32 (P=0.75)
PaCO ₂	4	P=0.99; I ² = 0%	Z=2.03 (P=0.04)
<i>SGRQ</i>			
Total score	5	P=0.96; I ² = 0%	Z=1.23 (P=0.22)
Activity	3	P=0.54; I ² = 0%	Z=1.03 (P=0.30)
Impact	3	P=0.38; I ² = 0%	Z=0.93 (P=0.35)
Symptom	3	P=0.89; I ² = 0%	Z=0.39 (P=0.70)

Table S3 Subgroup differences among AECOPD, SCOPD, and/or Mixed COPD

Outcomes	Subgroup differences (AECOPD, SCOPD, and Mixed COPD)
<i>Pulmonary function</i>	
FEV ₁	P=0.82; I ² = 0%
FEV%	P=0.33; I ² = 9.1%
FVC	P=0.44; I ² = 0%
FEV ₁ /FVC	P=0.45; I ² = 0%
<i>Arterial blood gas</i>	
PaO ₂	P=0.89; I ² = 0%
PaCO ₂	P<0.00001; I ² = 95.9%*
<i>SGRQ</i>	
Total score	P=0.02; I ² = 75.2%*
Activity	P=0.30; I ² = 6.9%
Impact	P=0.24; I ² = 26.7%
Symptom	P=0.97; I ² = 76.5%
<i>Symptoms Assessment</i>	P=0.57; I ² = 0%

* indicates significant difference among subgroups.

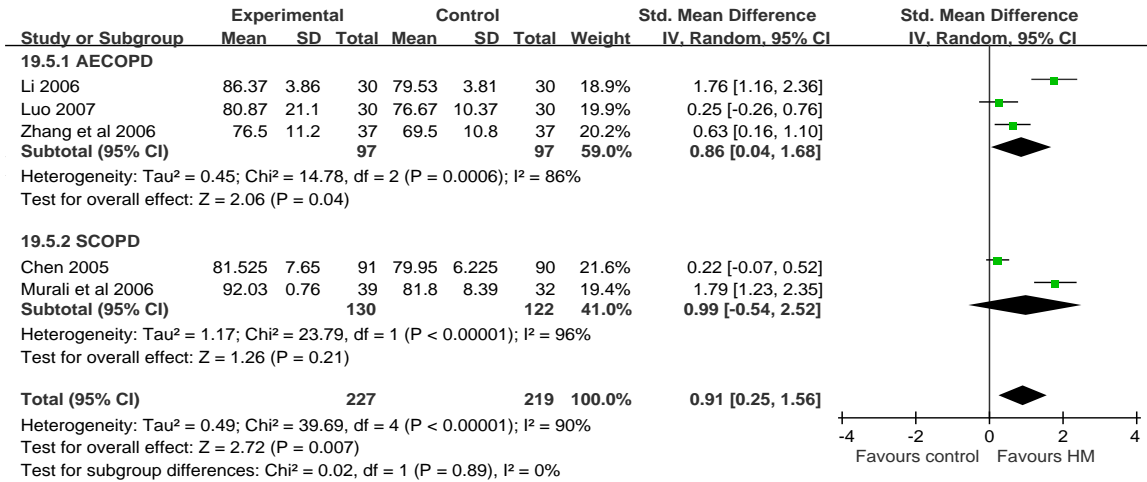
Table S4 Subgroup differences between placebo/non-placebo groups

Outcomes	Subgroup differences (placebo vs non-placebo group)
<i>Pulmonary function</i>	
FEV ₁	P=0.50; I ² = 0%
FEV%	P=0.75; I ² = 0%
FVC	P=0.73; I ² = 0%
FEV ₁ /FVC	P=0.56; I ² = 0%
<i>Arterial blood gas</i>	
PaO ₂	P=0.51; I ² = 0%
PaCO ₂	P=0.89; I ² = 0%
<i>SGRQ</i>	
Total score	P=0.75; I ² = 0%
Activity	P=0.31; I ² = 3.9%
Impact	P=0.32; I ² = 0%
Symptom	P=0.04; I ² = 76.5%*
<i>Symptoms Assessment</i>	P=0.43; I ² = 0%

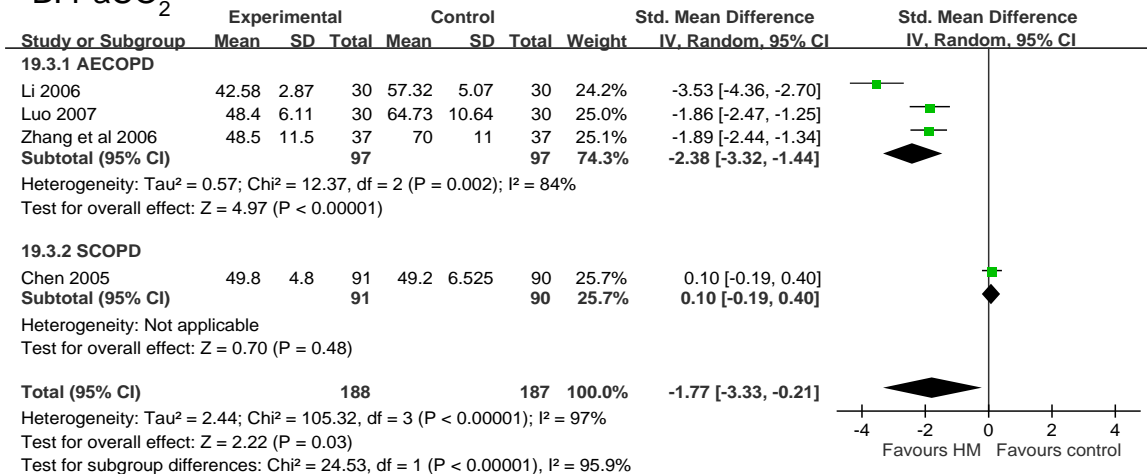
* indicates significant difference between subgroups.

Supplementary Figure S1 Arterial blood gas

A. PaO₂



B. PaCO₂



Supplementary Figure S1 Arterial blood gas. (A). Subgroup analysis of PaO₂ (B). Subgroup analysis of PaCO₂. Pooled studies showed HM may improve PaCO₂ and PaO₂ for AECOPD, which remains inclusive due the heterogeneity among studies.