

Andrographolide (A) 14-deoxy-11,12-didehydroandrographolide (B)

Figure 1

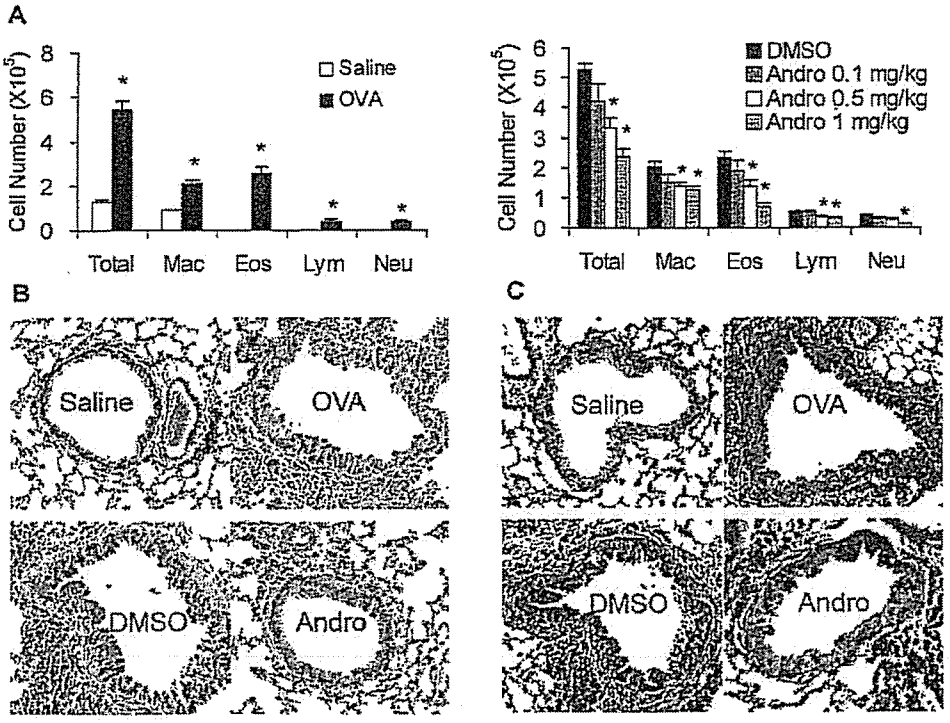


Figure 2

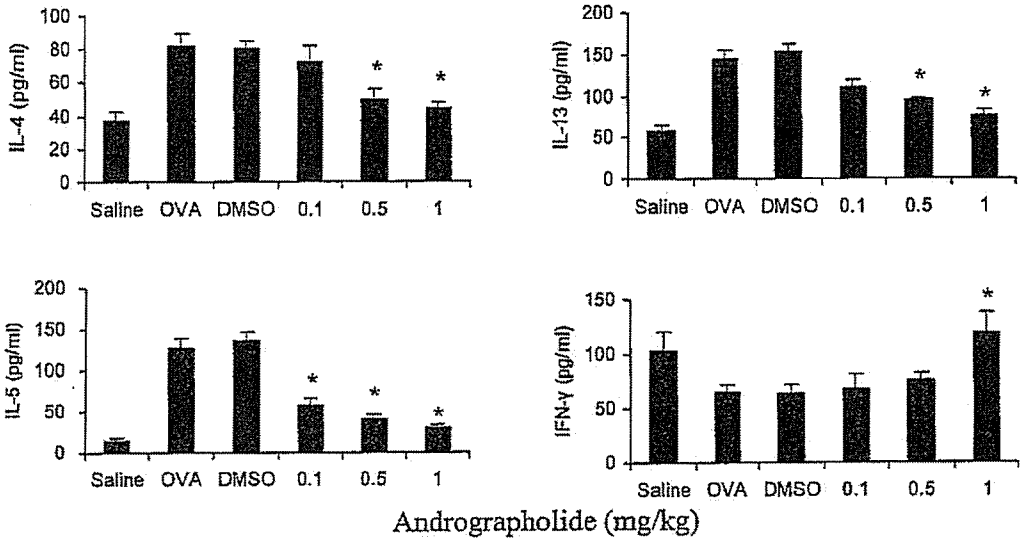


Figure 3

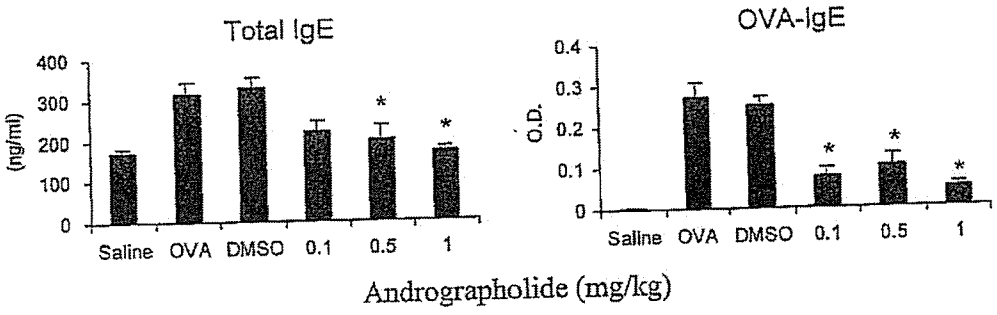


Figure 4

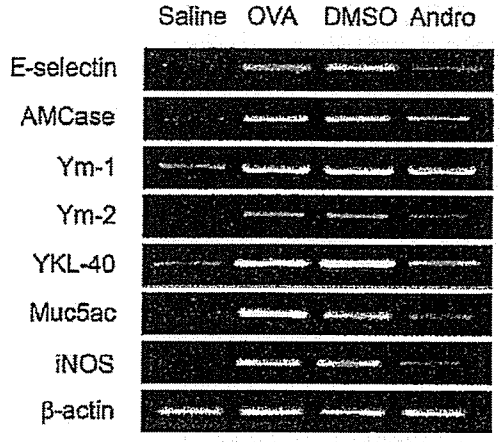


Figure 5

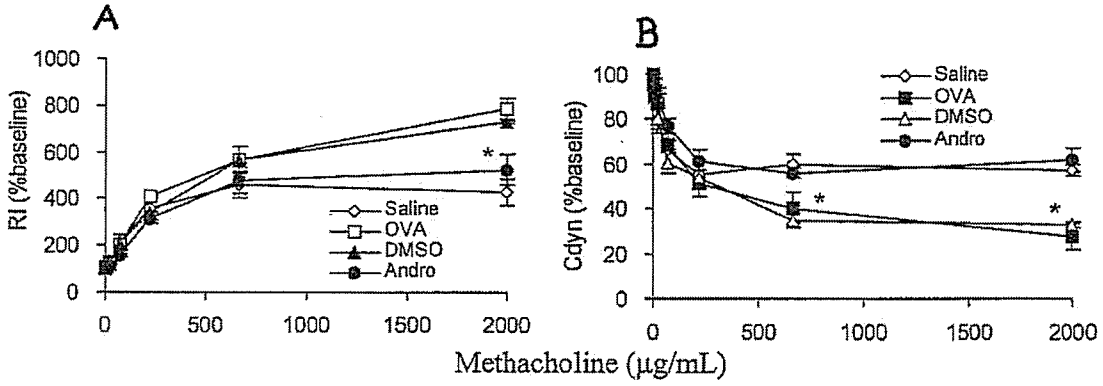


Figure 6

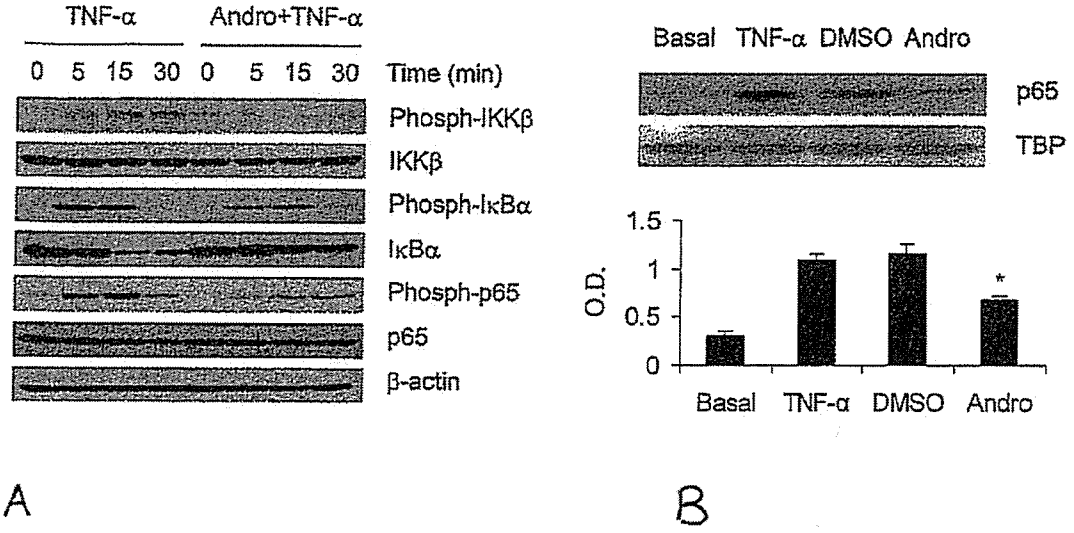

TNF-α
Andro+TNF-α
0 5 15 30 0 5 15 30
Time (min)
Phosph-IKKβ
IKKβ
Phosph-IκBα
IκBα
Phosph-p65
p65
β-actin
A
Basal TNF-α DMSO Andro
p65
TBP
O.D.
1.5
1
0.5
0
*
Basal TNF-α DMSO Andro
B

Figure 7

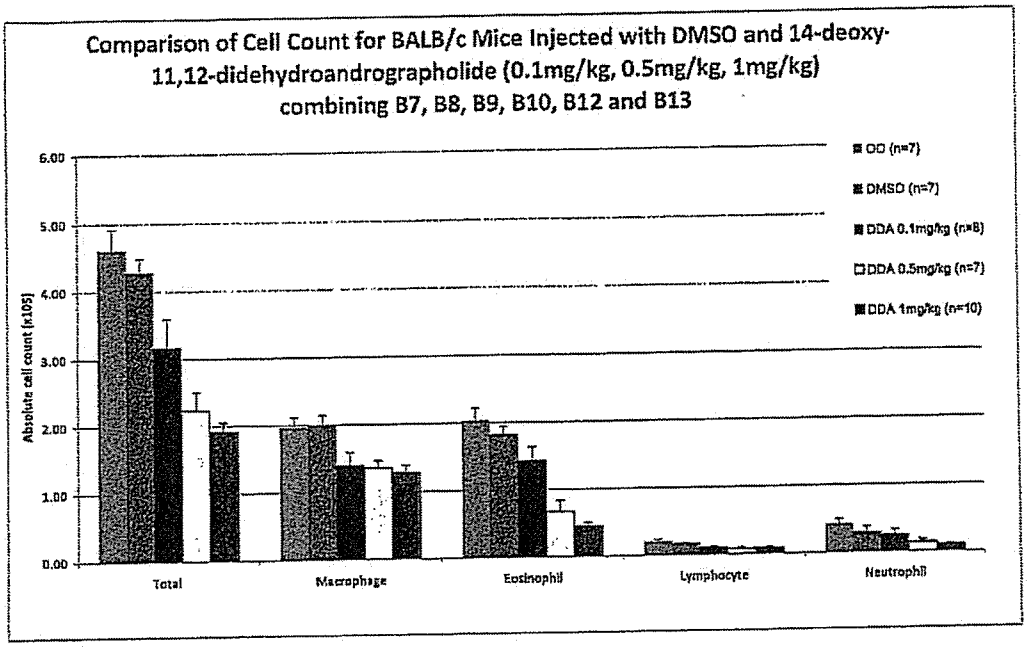


Figure 8A

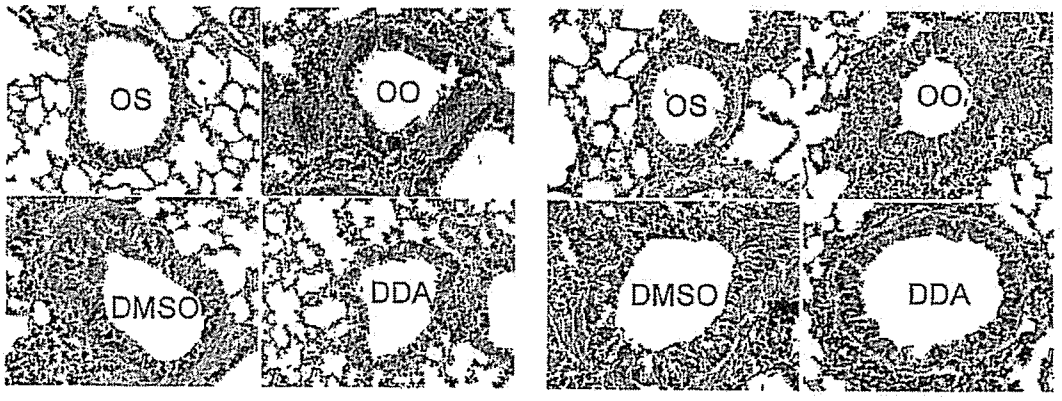


Figure 8B

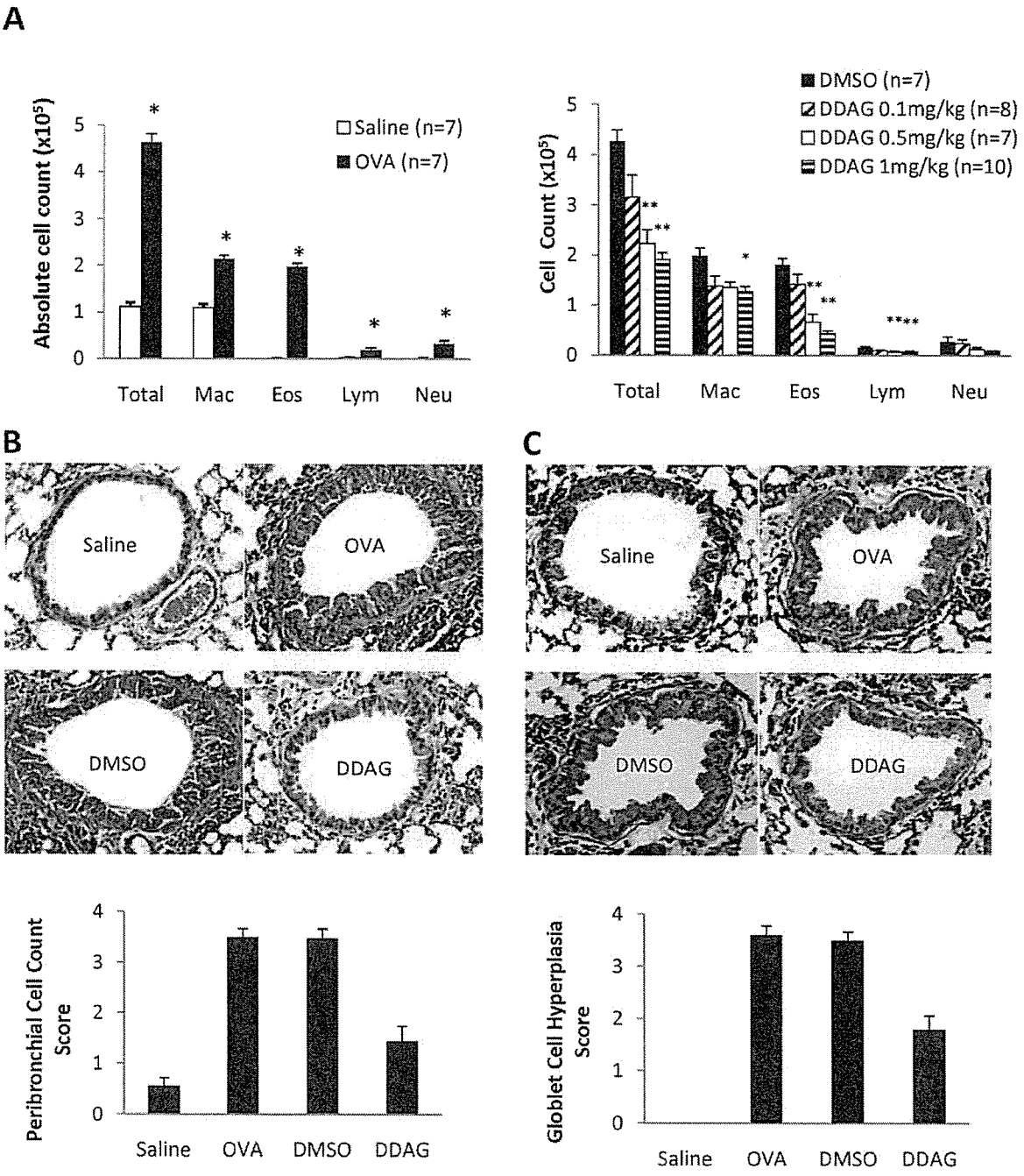
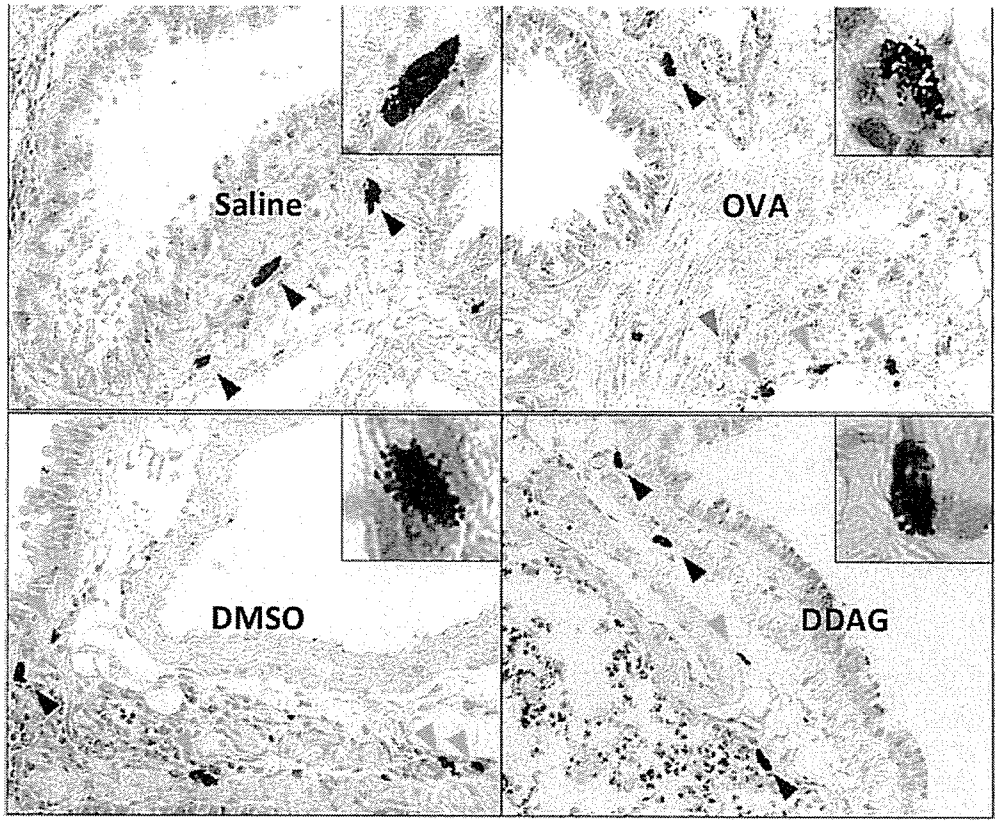

A
Absolute cell count (x10⁵)
Saline (n=7)
OVA (n=7)
Total
Mac
Eos
Lym
Neu
Cell Count (x10⁵)
DMSO (n=7)
DDAG 0.1mg/kg (n=8)
DDAG 0.5mg/kg (n=7)
DDAG 1mg/kg (n=10)
B
Saline
OVA
DMSO
DDAG
C
Saline
OVA
DMSO
DDAG
Peribronchial Cell Count Score
Saline
OVA
DMSO
DDAG
Globlet Cell Hyperplasia Score
Saline
OVA
DMSO
DDAG

Figure 9

A


Saline
OVA
DMSO
DDAG

B

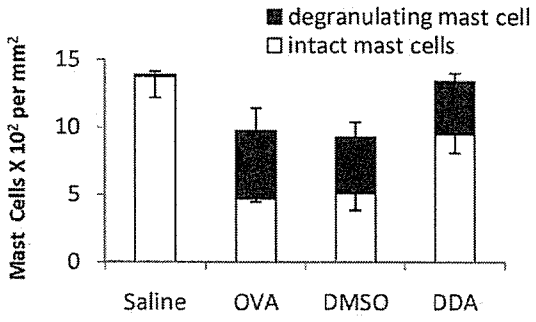

degranulating mast cell
intact mast cells
Mast Cells X 10² per mm²
15
10
5
0
Saline
OVA
DMSO
DDA

Figure 10

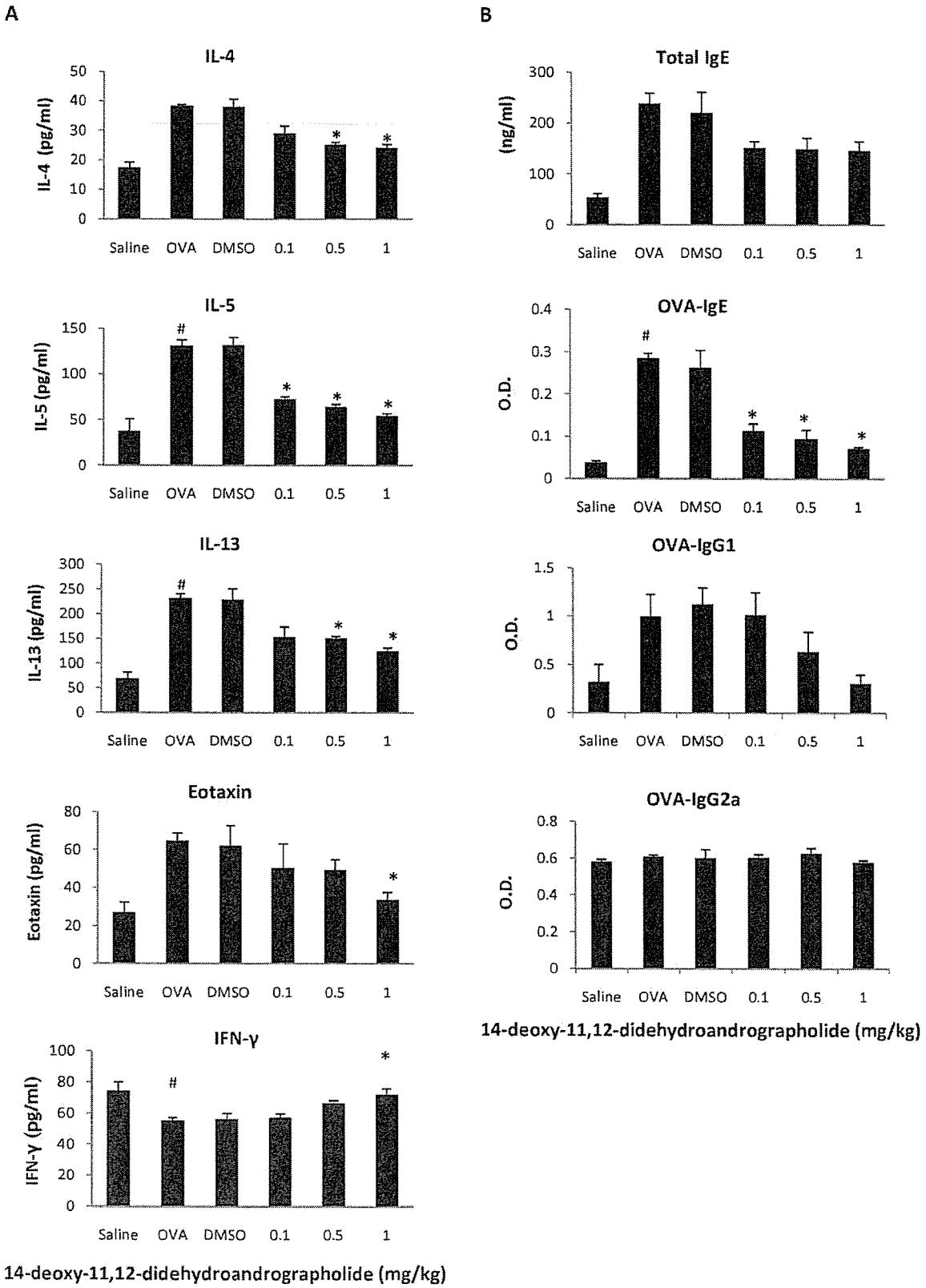
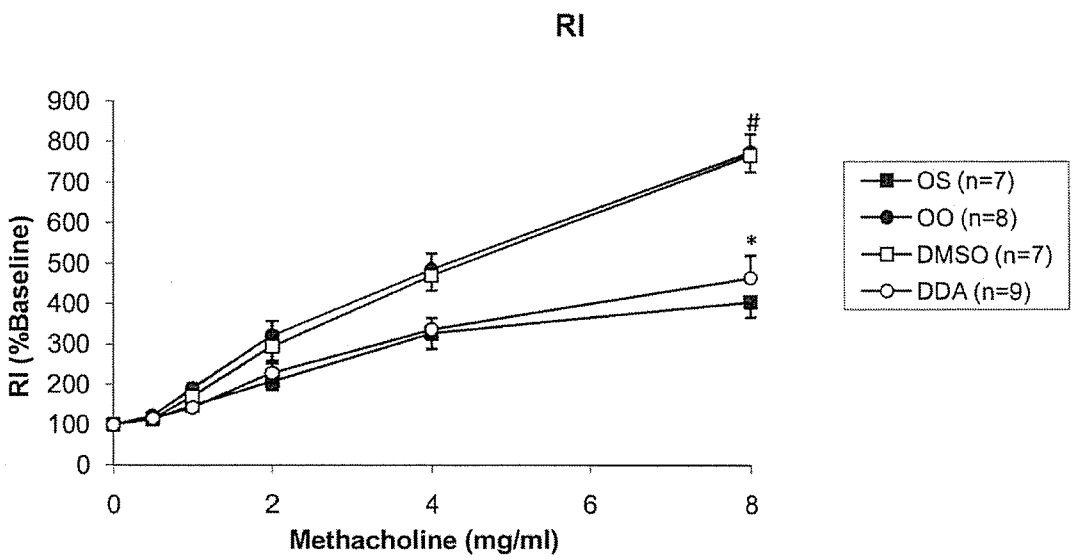

A
IL-4
IL-4 (pg/ml)
50
40
30
20
10
0
Saline OVA DMSO 0.1 0.5 1
IL-5
IL-5 (pg/ml)
150
100
50
0
Saline OVA DMSO 0.1 0.5 1
IL-13
IL-13 (pg/ml)
300
250
200
150
100
50
0
Saline OVA DMSO 0.1 0.5 1
Eotaxin
Eotaxin (pg/ml)
80
60
40
20
0
Saline OVA DMSO 0.1 0.5 1
IFN-γ
IFN-γ (pg/ml)
100
80
60
40
20
0
Saline OVA DMSO 0.1 0.5 1
14-deoxy-11,12-didehydroandrographolide (mg/kg)
B
Total IgE
(ng/ml)
300
200
100
0
Saline OVA DMSO 0.1 0.5 1
OVA-IgE
O.D.
0.4
0.3
0.2
0.1
0
Saline OVA DMSO 0.1 0.5 1
OVA-IgG1
O.D.
1.5
1
0.5
0
Saline OVA DMSO 0.1 0.5 1
OVA-IgG2a
O.D.
0.8
0.6
0.4
0.2
0
Saline OVA DMSO 0.1 0.5 1
14-deoxy-11,12-didehydroandrographolide (mg/kg)

Figure 11

A


RI
RI (%Baseline)
900
800
700
600
500
400
300
200
100
0
0
2
4
6
8
Methacholine (mg/ml)
#
*
OS (n=7)
OO (n=8)
DMSO (n=7)
DDA (n=9)

B

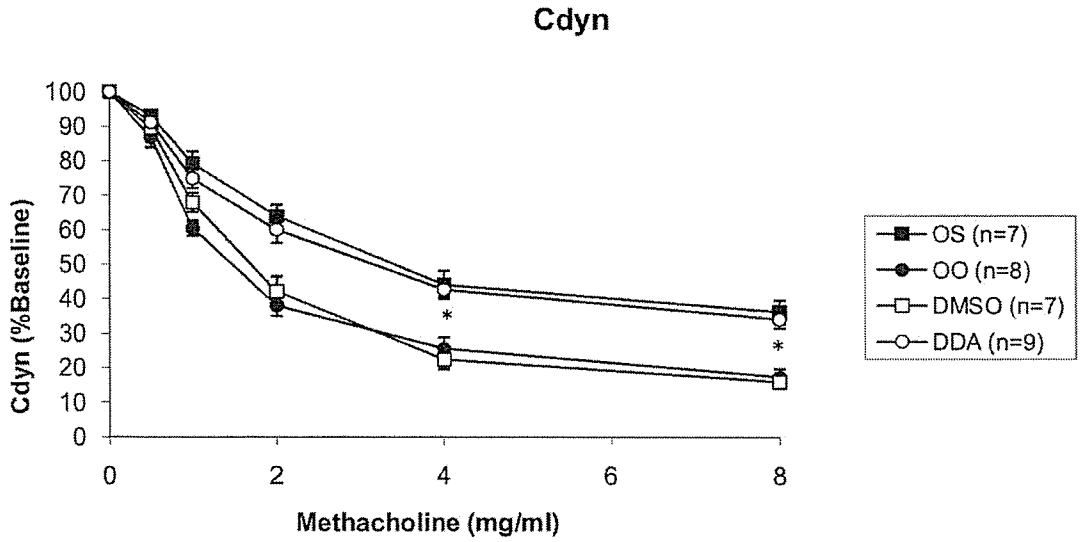

Cdyn
Cdyn (%Baseline)
100
90
80
70
60
50
40
30
20
10
0
0
2
4
6
8
Methacholine (mg/ml)
*
*
OS (n=7)
OO (n=8)
DMSO (n=7)
DDA (n=9)

Figure 12

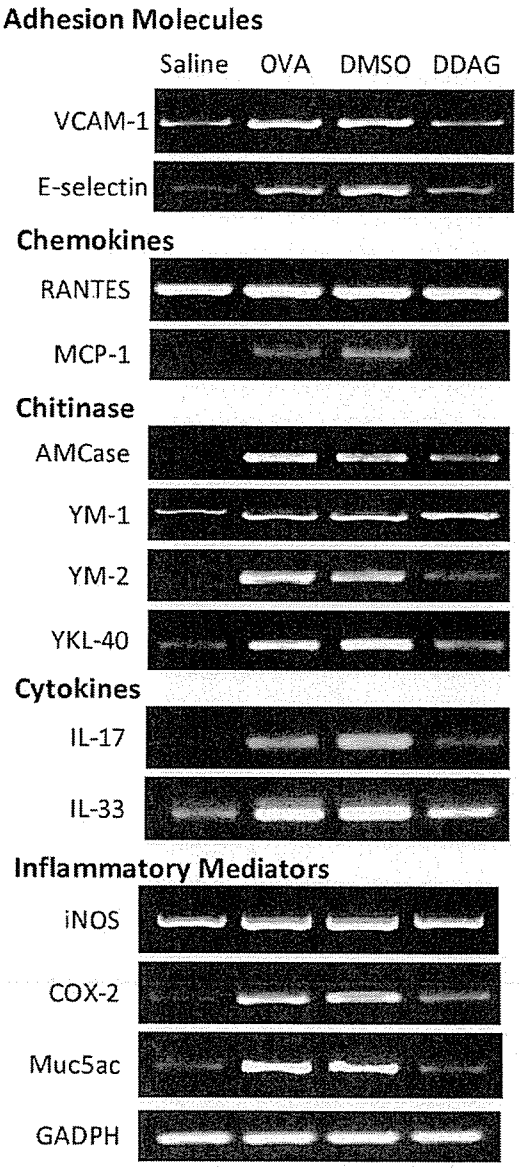

Adhesion Molecules
Saline
OVA
DMSO
DDAG
VCAM-1
E-selectin
Chemokines
RANTES
MCP-1
Chitinase
AMCase
YM-1
YM-2
YKL-40
Cytokines
IL-17
IL-33
Inflammatory Mediators
iNOS
COX-2
Muc5ac
GADPH

Figure 13

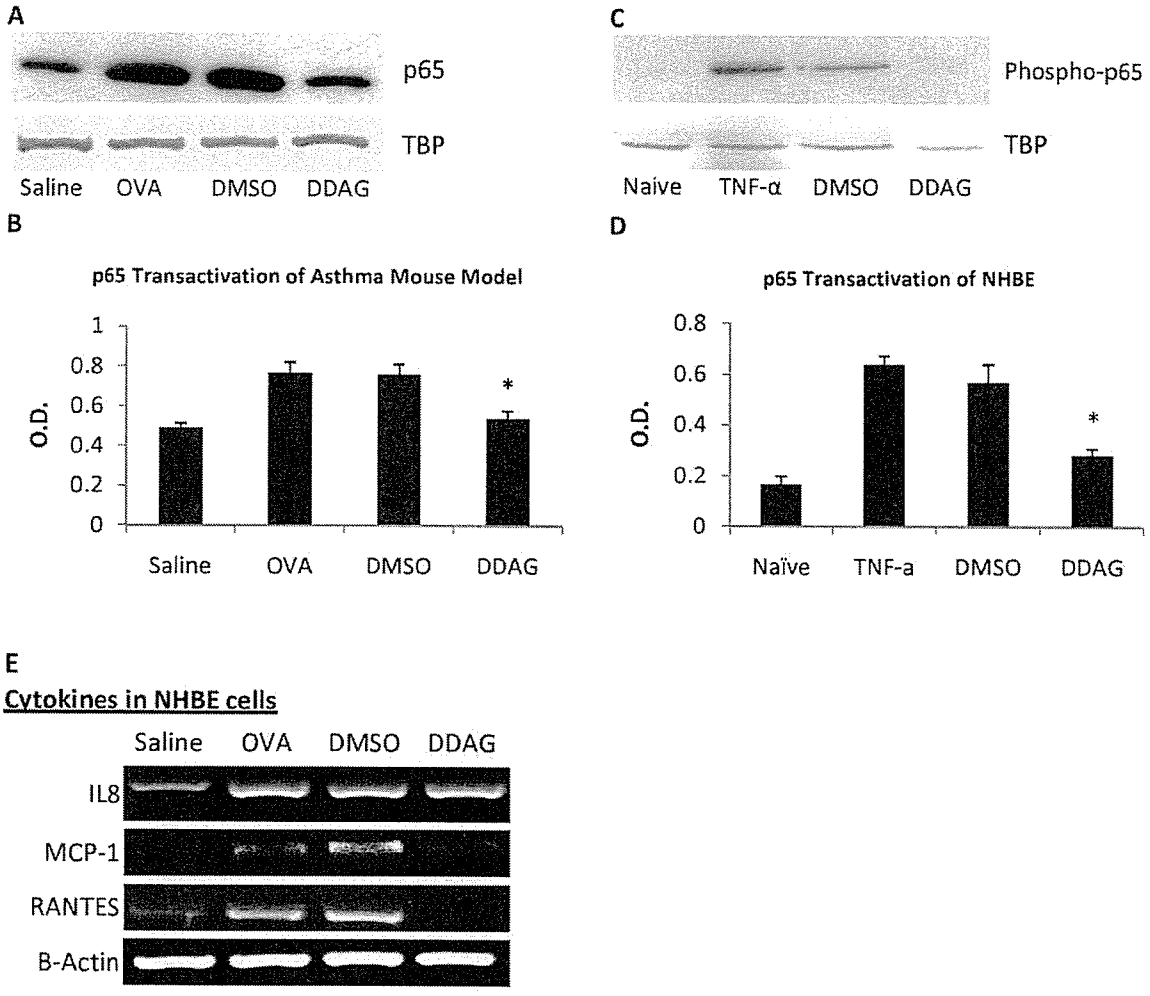

A
p65
TBP
Saline
OVA
DMSO
DDAG
C
Phospho-p65
TBP
Naive
TNF-α
DMSO
DDAG
B
p65 Transactivation of Asthma Mouse Model
O.D.
1
0.8
0.6
0.4
0.2
0
*
Saline
OVA
DMSO
DDAG
D
p65 Transactivation of NHBE
O.D.
0.8
0.6
0.4
0.2
0
*
Naïve
TNF-a
DMSO
DDAG
E
Cytokines in NHBE cells
Saline
OVA
DMSO
DDAG
IL8
MCP-1
RANTES
B-Actin

Figure 14

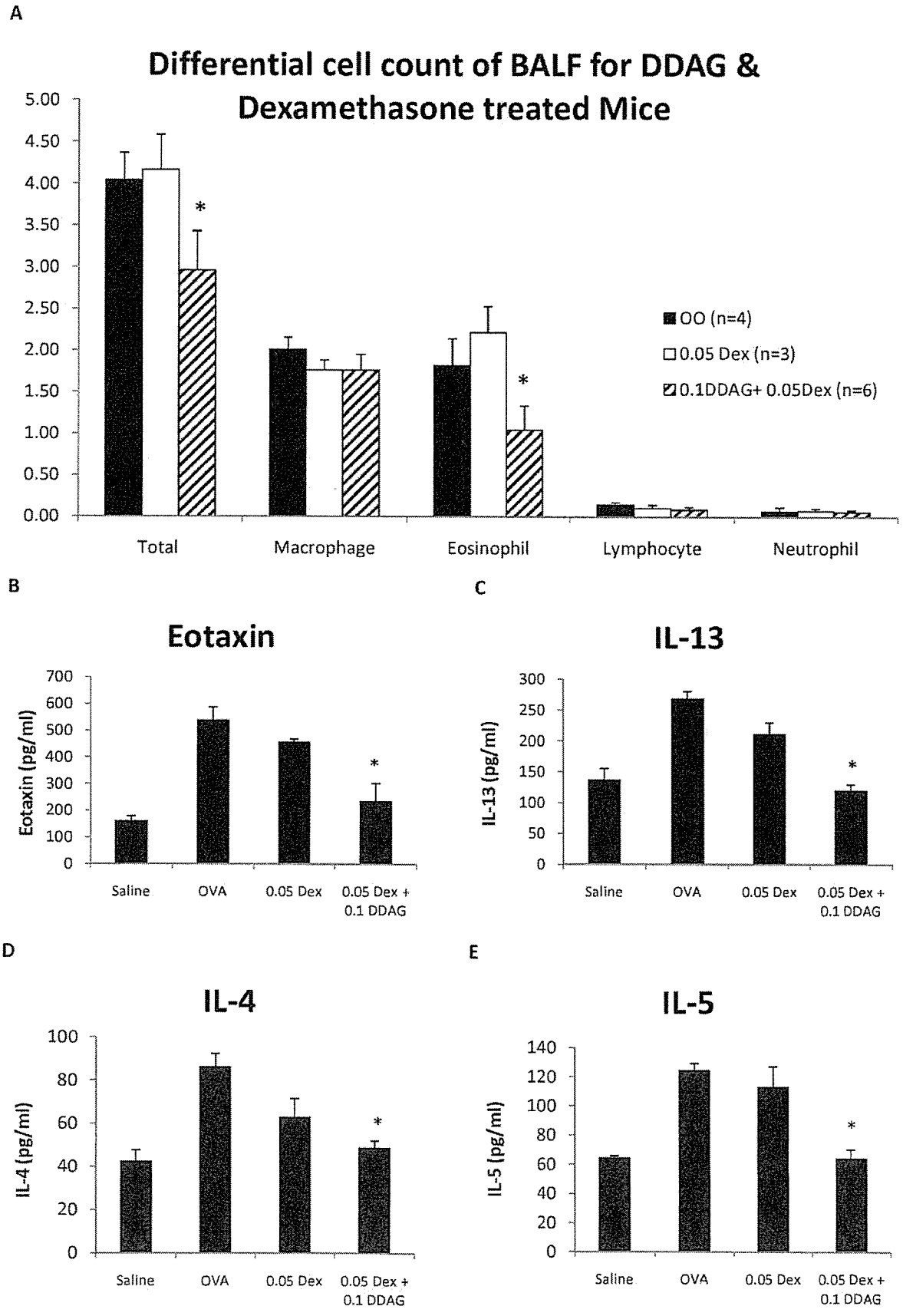

A
Differential cell count of BALF for DDAG & Dexamethasone treated Mice
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
*
*
OO (n=4)
0.05 Dex (n=3)
0.1DDAG+ 0.05Dex (n=6)
Total
Macrophage
Eosinophil
Lymphocyte
Neutrophil
B
Eotaxin
Eotaxin (pg/ml)
700
600
500
400
300
200
100
0
*
Saline
OVA
0.05 Dex
0.05 Dex + 0.1 DDAG
C
IL-13
IL-13 (pg/ml)
300
250
200
150
100
50
0
*
Saline
OVA
0.05 Dex
0.05 Dex + 0.1 DDAG
D
IL-4
IL-4 (pg/ml)
100
80
60
40
20
0
*
Saline
OVA
0.05 Dex
0.05 Dex + 0.1 DDAG
E
IL-5
IL-5 (pg/ml)
140
120
100
80
60
40
20
0
*
Saline
OVA
0.05 Dex
0.05 Dex + 0.1 DDAG

Figure 15

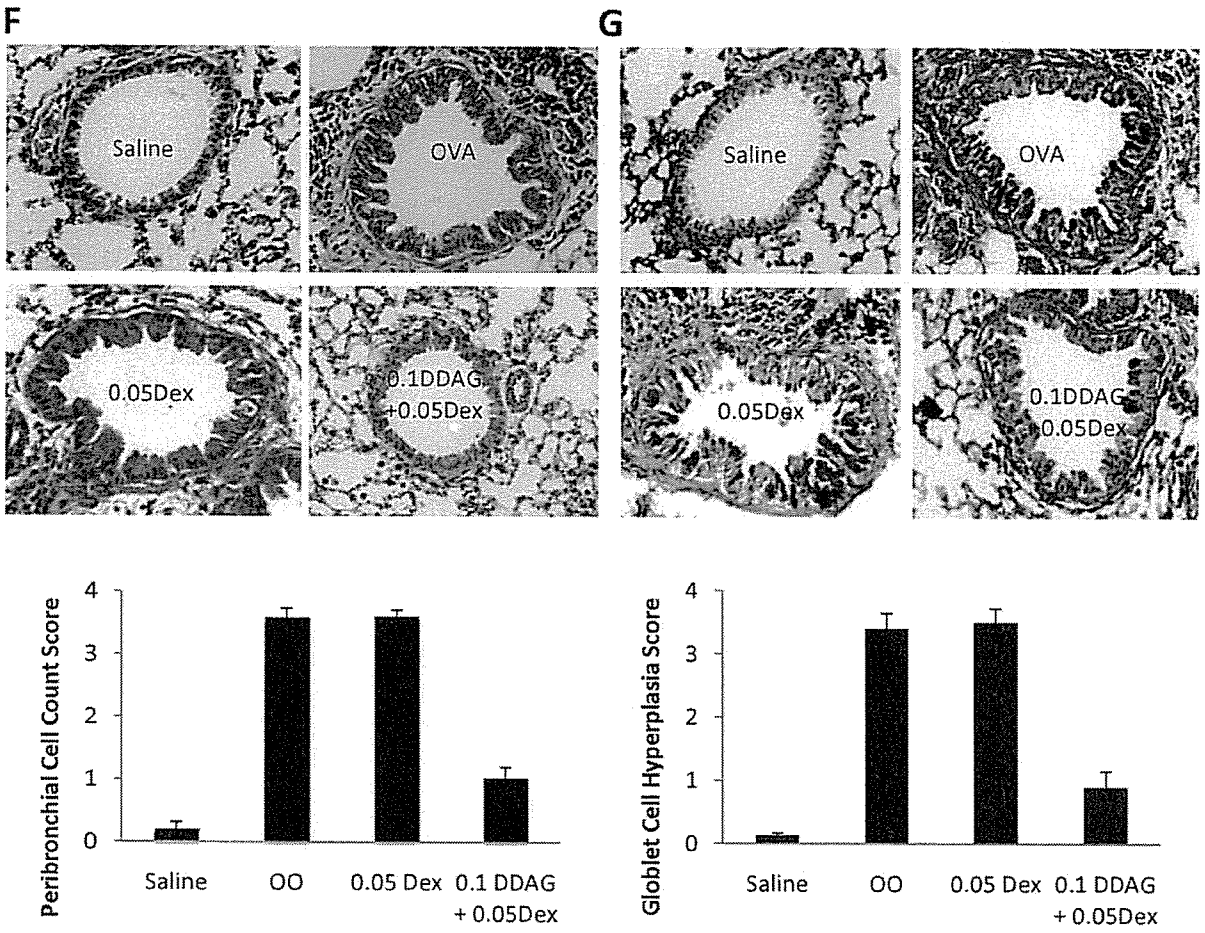

F
G
Saline
OVA
0.05Dex
0.1DDAG
+0.05Dex
Saline
OVA
0.05Dex
0.1DDAG
0.05Dex
Peribronchial Cell Count Score
4
3
2
1
0
Saline
OO
0.05 Dex
0.1 DDAG
+ 0.05Dex
Globlet Cell Hyperplasia Score
4
3
2
1
0
Saline
OO
0.05 Dex
0.1 DDAG
+ 0.05Dex

Figure 15