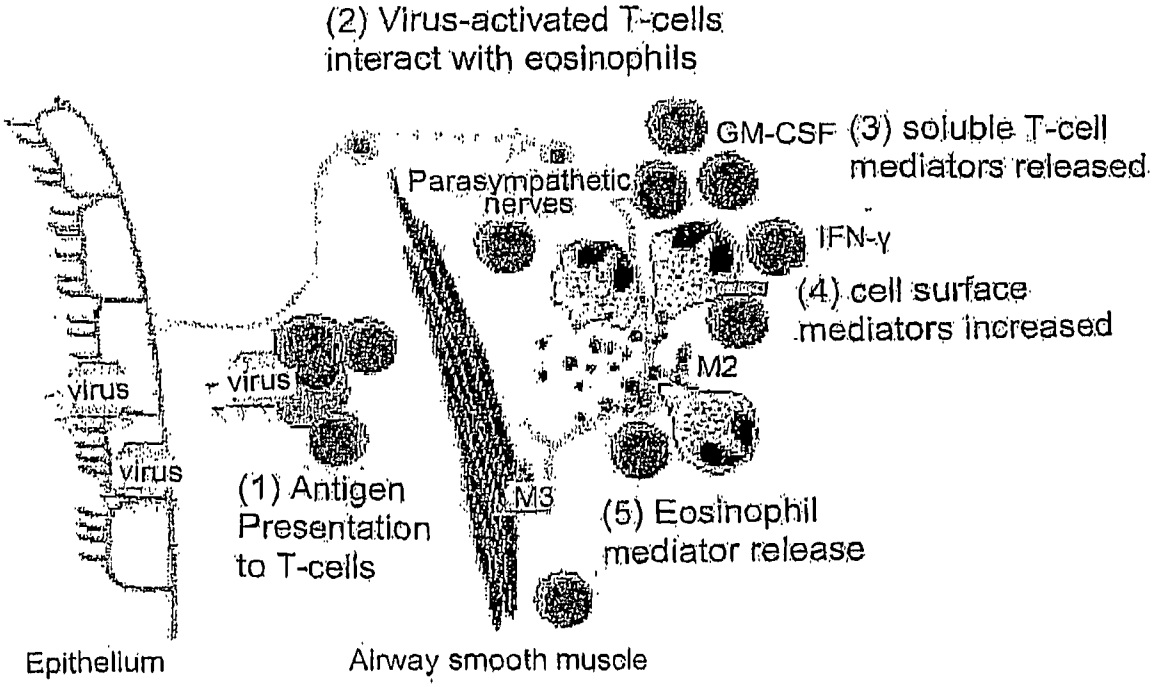

(2) Virus-activated T-cells interact with eosinophils
GM-CSF
(3) soluble T-cell mediators released
Parasympathetic nerves
IFN-γ
(4) cell surface mediators increased
M2
virus
virus
virus
(1) Antigen Presentation to T-cells
M3
(5) Eosinophil mediator release
Epithelium
Airway smooth muscle

FIG. 1

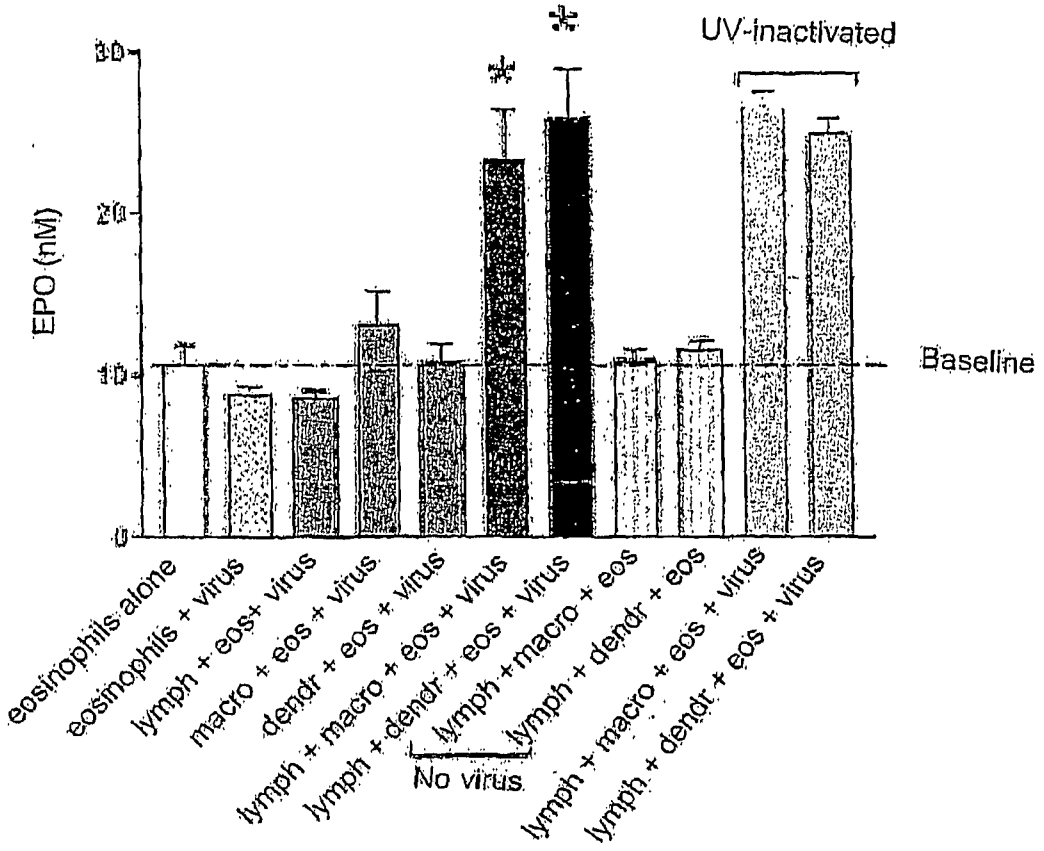

UV-inactivated
EPO (nM)
30
20
10
0
Baseline
eosinophils alone
eosinophils + virus
lymph + eos+ virus
macro + eos + virus
dendr + eos + virus
lymph + macro + eos + virus
lymph + dendr + eos + virus
lymph +macro + eos
lymph + dendr + eos
lymph + macro + eos + virus
lymph + dendr + eos + virus
No virus

FIG. 2

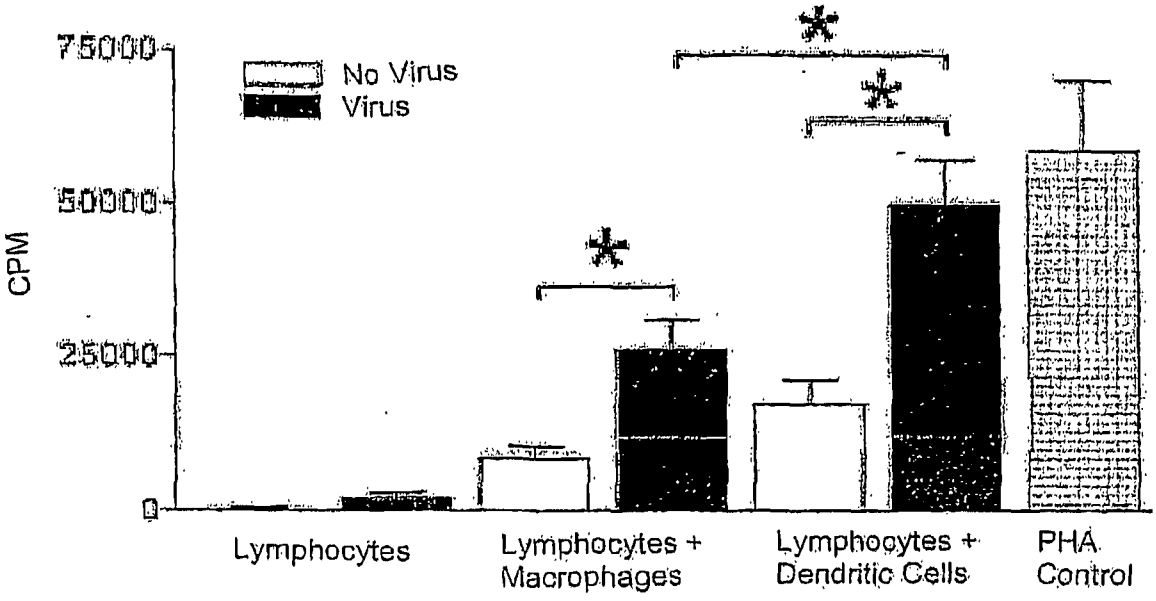
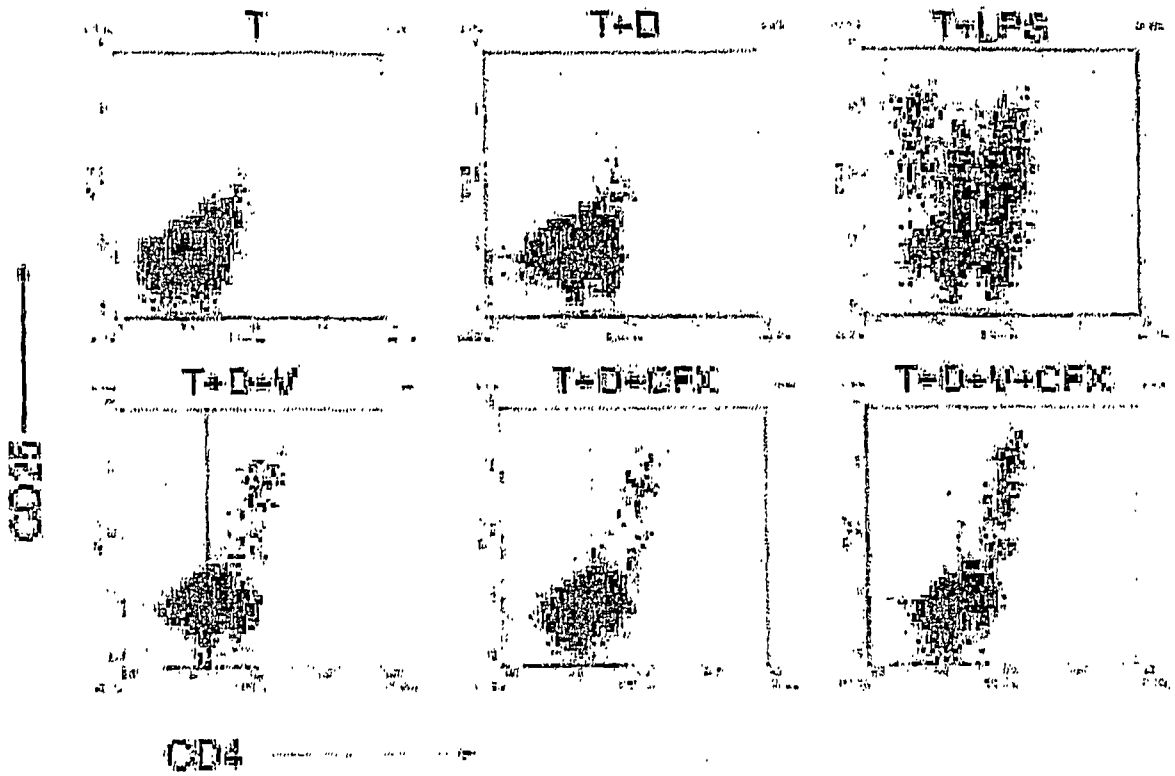

75000
50000
25000
0
CPM
No Virus
Virus
Lymphocytes
Lymphocytes + Macrophages
Lymphocytes + Dendritic Cells
PHA Control

FIG. 3


T
T+D
T+LPS
T+D+V
T+D+CFX
T+D+V+CFX
CD8
CD4

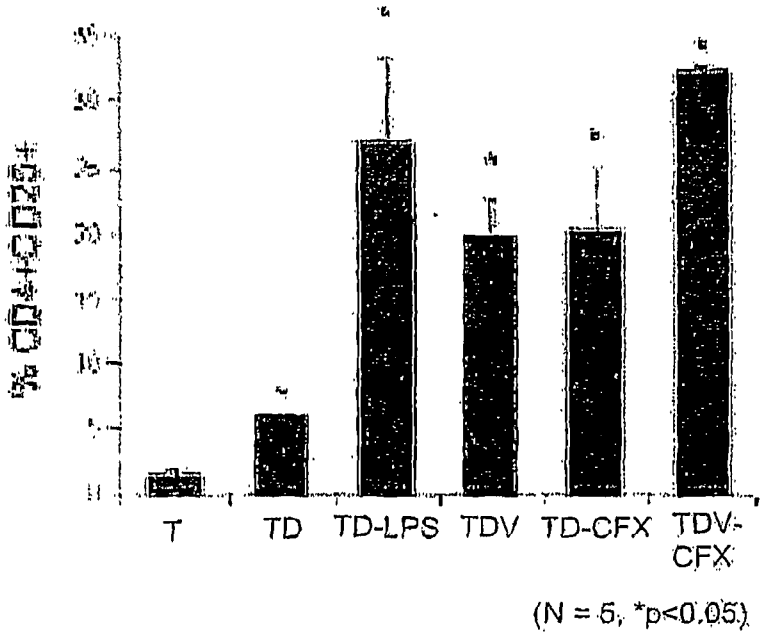

% CD4+CD25+
T
TD
TD-LPS
TDV
TD-CFX
TDV-CFX
(N = 5, *p<0.05)

FIG. 4

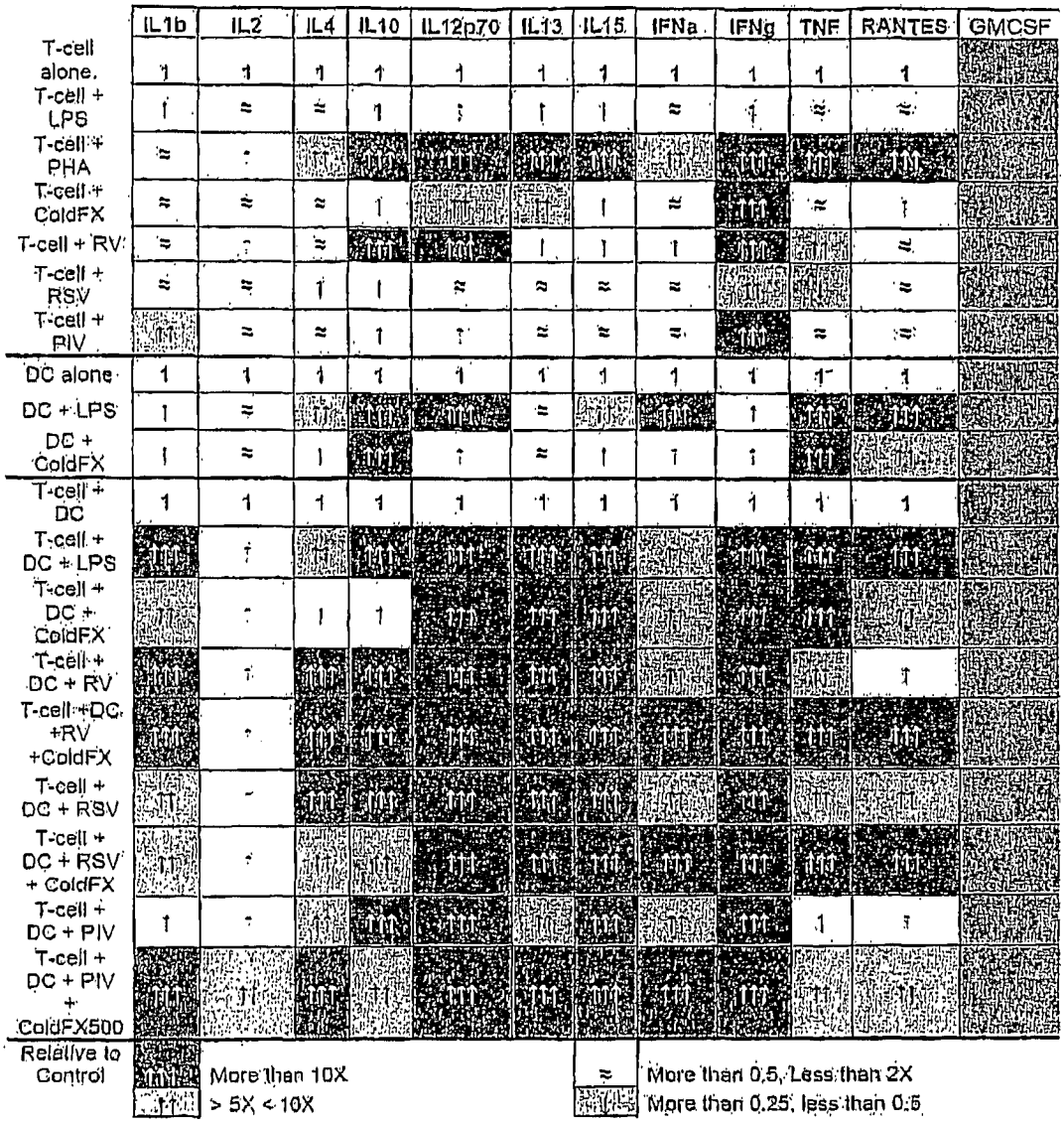
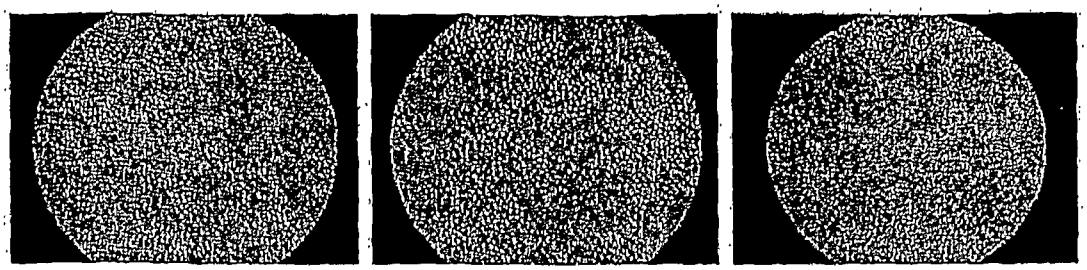

IL1b
IL2
IL4
IL10
IL12p70
IL13
IL15
IFNa
IFNg
TNF
RANTES
GMCSF
T-cell alone
T-cell + LPS
T-cell + PHA
T-cell + ColdFX
T-cell + RV
T-cell + RSV
T-cell + PIV
DC alone
DC + LPS
DC + ColdFX
T-cell + DC
T-cell + DC + LPS
T-cell + DC + ColdFX
T-cell + DC + RV
T-cell +DC +RV +ColdFX
T-cell + DC + RSV
T-cell + DC + RSV + ColdFX
T-cell + DC + PIV
T-cell + DC + PIV + ColdFX500
Relative to Control
More than 10X
> 5X < 10X
≈
More than 0.5, Less than 2X
More than 0.25, less than 0.5

FIG. 5


Lymphocytes
+ CVT-E002
Lymphocytes
+ Dendritic Cells
Lymphocytes
+ CVT-E002
+ Dendritic Cells

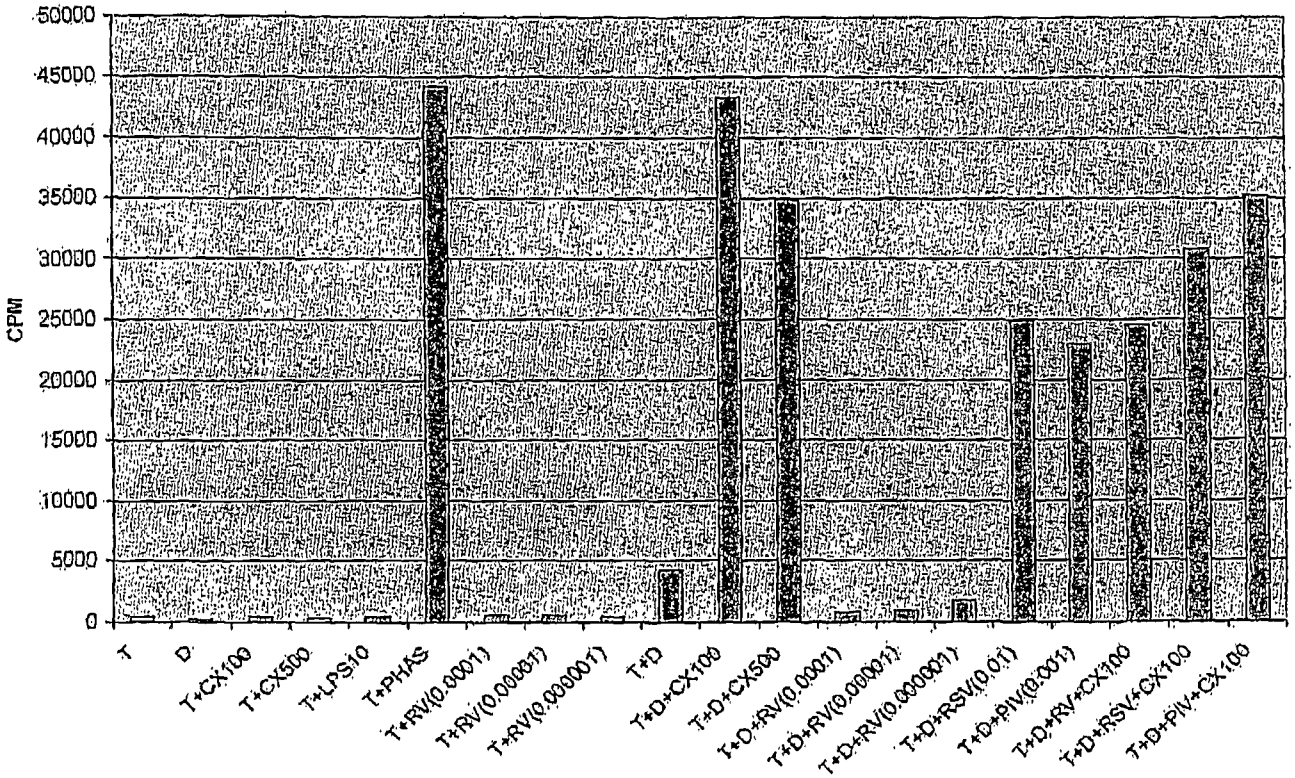

CPM
50000
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
T
D
T+CX100
T+CX500
T+LPS10
T+PHAS
T+RV(0.0001)
T+RV(0.00001)
T+RV(0.000001)
T+D
T+D+CX100
T+D+CX500
T+D+RV(0.0001)
T+D+RV(0.00001)
T+D+RV(0.000001)
T+D+RSV(0.01)
T+D+PIV(0.001)
T+D+RV+CX100
T+D+RSV+CX100
T+D+PIV+CX100

FIG. 6

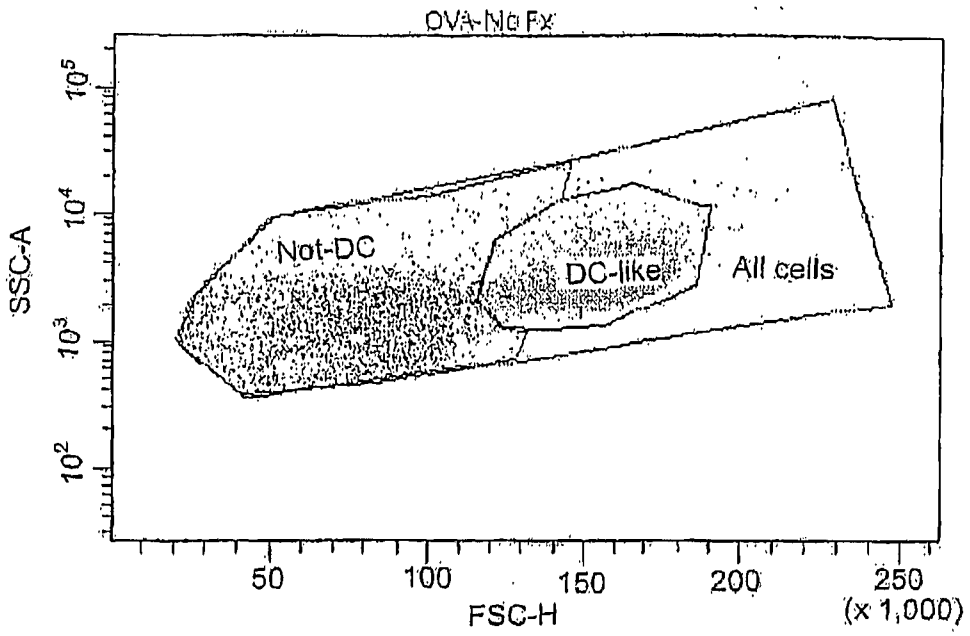

OVA-No Fx
SSC-A
10^5
10^4
10^3
10^2
Not-DC
DC-like
All cells
50
100
150
200
250
FSC-H
(x 1,000)

FIG. 7A

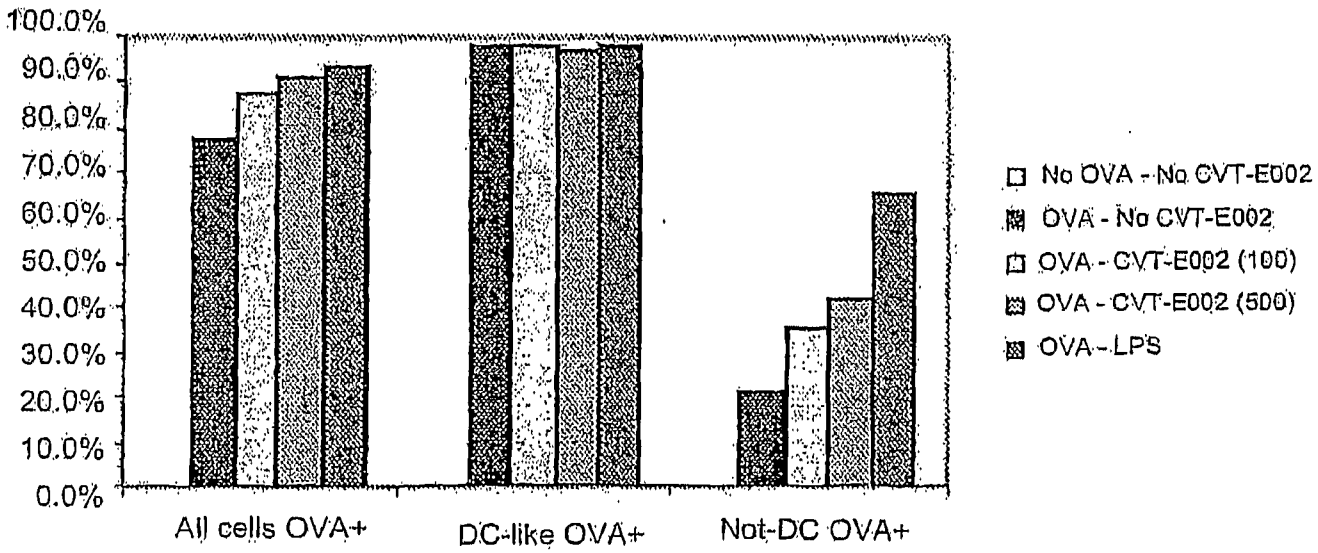

100.0%
90.0%
80.0%
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
All cells OVA+
DC-like OVA+
Not-DC OVA+
No OVA - No CVT-E002
OVA - No CVT-E002
OVA - CVT-E002 (100)
OVA - CVT-E002 (500)
OVA - LPS

FIG. 7B

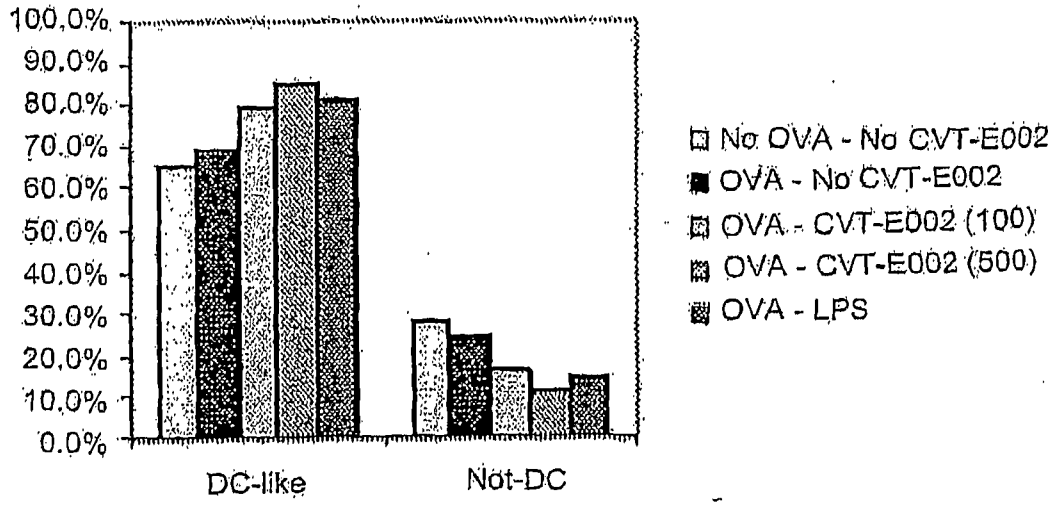

100.0%
90.0%
80.0%
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
DC-like
Not-DC
No OVA - No CVT-E002
OVA - No CVT-E002
OVA - CVT-E002 (100)
OVA - CVT-E002 (500)
OVA - LPS

FIG. 7C

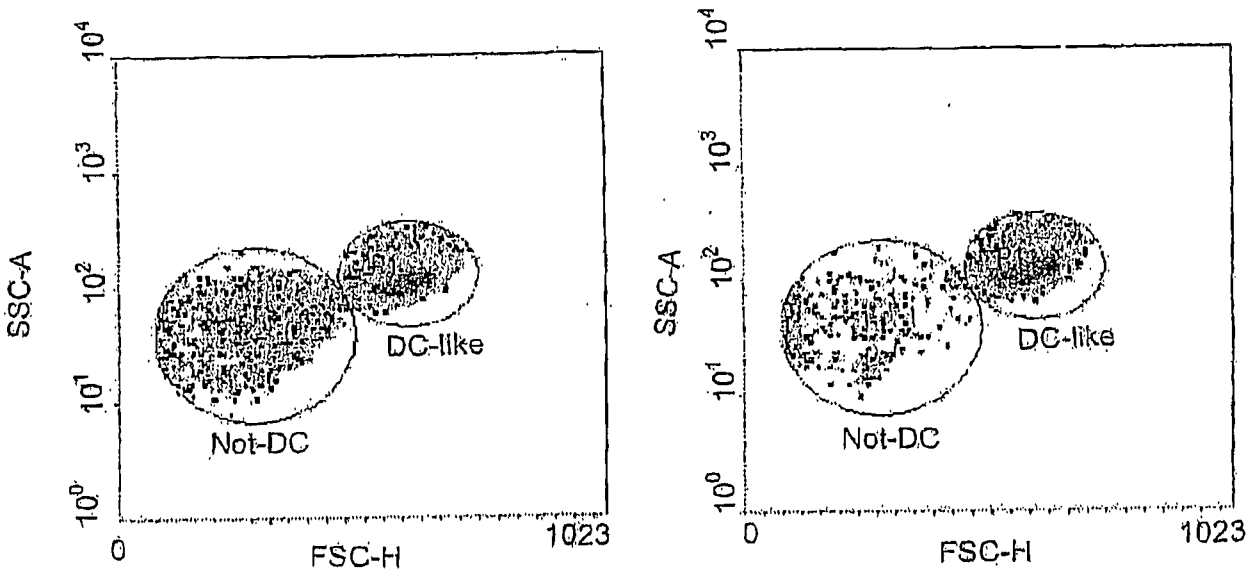

SSC-A
10^4
10^3
10^2
10^1
10^0
DC-like
Not-DC
0
FSC-H
1023
SSC-A
10^4
10^3
10^2
10^1
10^0
DC-like
Not-DC
0
FSC-H
1023

FIG. 7D

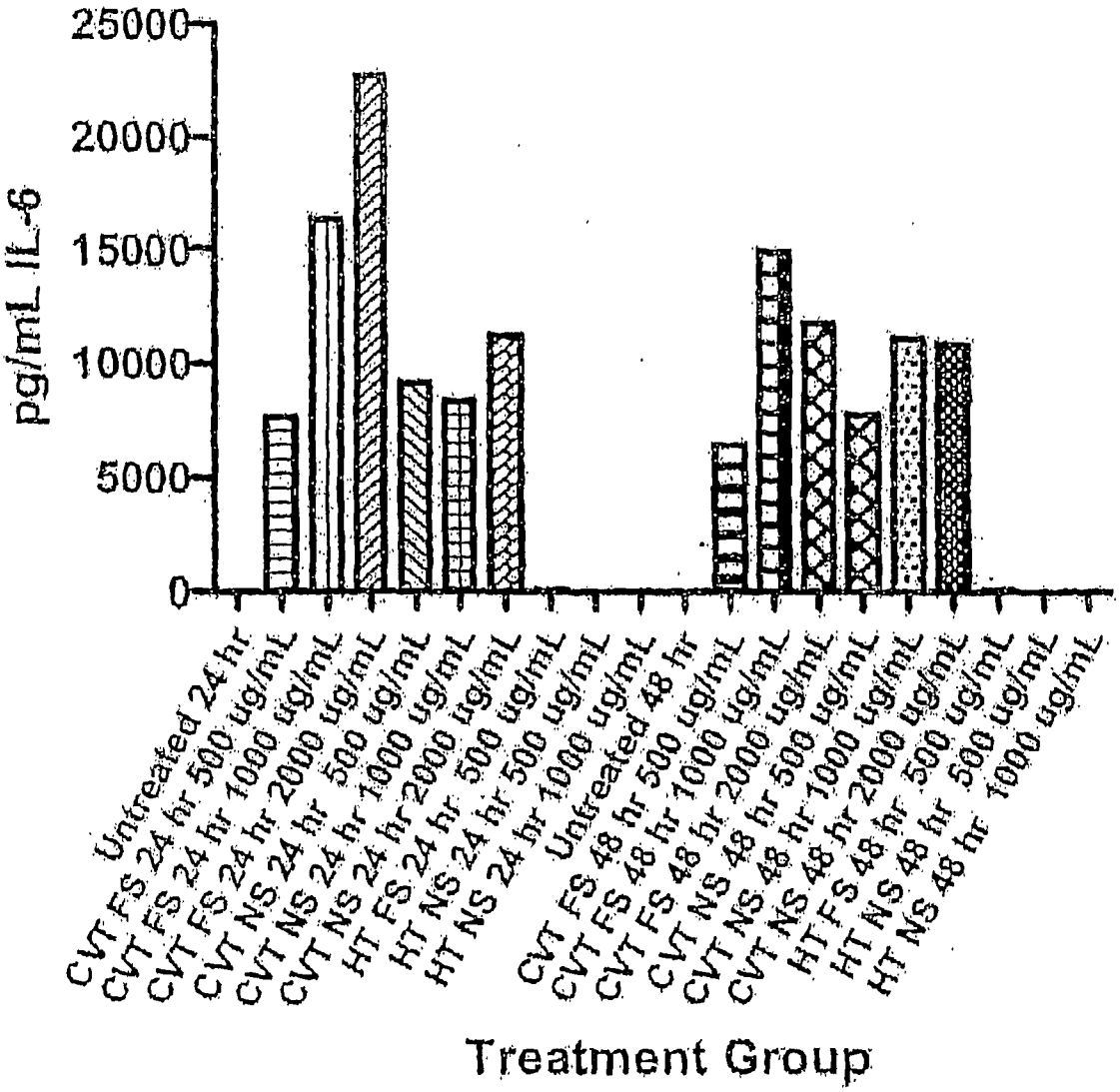

25000
20000
15000
10000
5000
0
pg/mL IL-6
Untreated 24 hr
CVT FS 24 hr 500 ug/mL
CVT FS 24 hr 1000 ug/mL
CVT FS 24 hr 2000 ug/mL
CVT NS 24 hr 500 ug/mL
CVT NS 24 hr 1000 ug/mL
CVT NS 24 hr 2000 ug/mL
HT FS 24 hr 500 ug/mL
HT NS 24 hr 500 ug/mL
HT NS 24 hr 1000 ug/mL
Untreated 48 hr
CVT FS 48 hr 500 ug/mL
CVT FS 48 hr 1000 ug/mL
CVT FS 48 hr 2000 ug/mL
CVT NS 48 hr 500 ug/mL
CVT NS 48 hr 1000 ug/mL
CVT NS 48 hr 2000 ug/mL
HT FS 48 hr 500 ug/mL
HT NS 48 hr 500 ug/mL
HT NS 48 hr 1000 ug/mL
Treatment Group

FIG. 8A

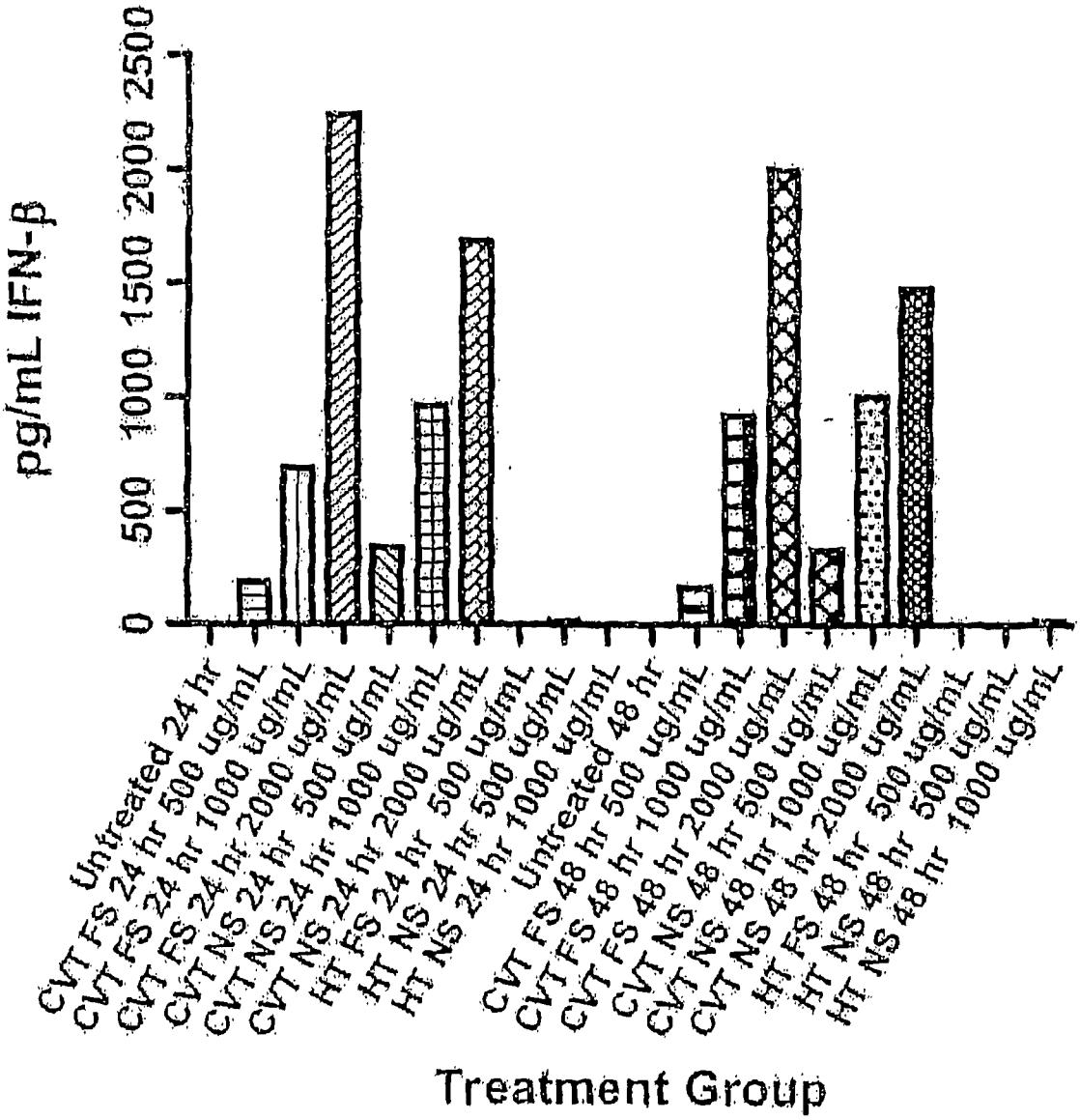

pg/mL IFN-β
0
500
1000
1500
2000
2500
Untreated 24 hr
CVT FS 24 hr 500 ug/mL
CVT FS 24 hr 1000 ug/mL
CVT FS 24 hr 2000 ug/mL
CVT NS 24 hr 500 ug/mL
CVT NS 24 hr 1000 ug/mL
CVT NS 24 hr 2000 ug/mL
HT FS 24 hr 500 ug/mL
HT FS 24 hr 1000 ug/mL
HT FS 24 hr 2000 ug/mL
HT NS 24 hr 500 ug/mL
HT NS 24 hr 1000 ug/mL
Untreated 48 hr
CVT FS 48 hr 500 ug/mL
CVT FS 48 hr 1000 ug/mL
CVT FS 48 hr 2000 ug/mL
CVT NS 48 hr 500 ug/mL
CVT NS 48 hr 1000 ug/mL
CVT NS 48 hr 2000 ug/mL
HT FS 48 hr 500 ug/mL
HT FS 48 hr 1000 ug/mL
HT NS 48 hr 500 ug/mL
HT NS 48 hr 1000 ug/mL
Treatment Group

FIG. 8B

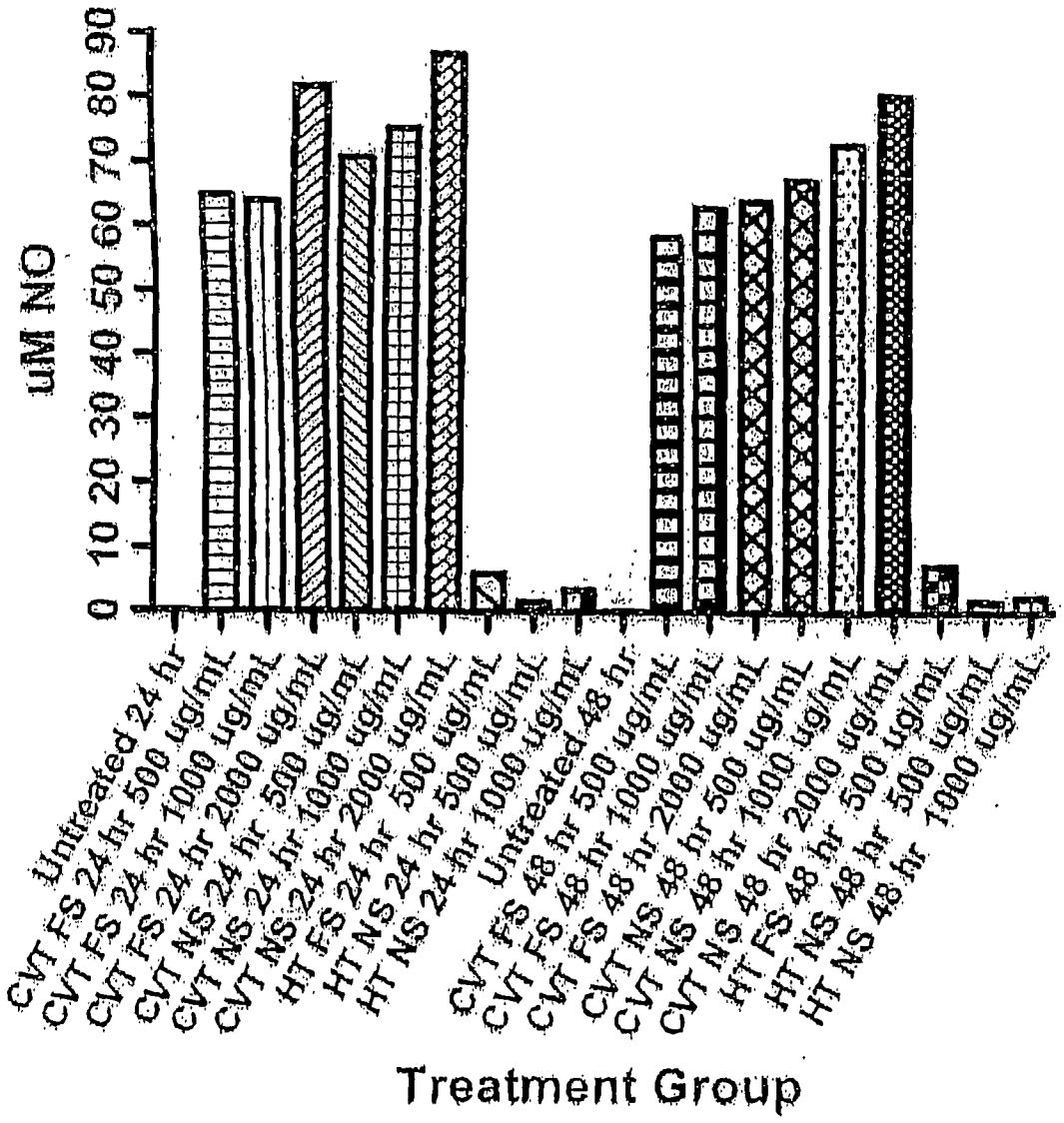

uM NO
0 10 20 30 40 50 60 70 80 90
Untreated 24 hr
CVT FS 24 hr 500 ug/mL
CVT FS 24 hr 1000 ug/mL
CVT FS 24 hr 2000 ug/mL
CVT NS 24 hr 500 ug/mL
CVT NS 24 hr 1000 ug/mL
CVT NS 24 hr 2000 ug/mL
HT FS 24 hr 500 ug/mL
HT NS 24 hr 500 ug/mL
HT NS 24 hr 1000 ug/mL
Untreated 48 hr
CVT FS 48 hr 500 ug/mL
CVT FS 48 hr 1000 ug/mL
CVT FS 48 hr 2000 ug/mL
CVT NS 48 hr 500 ug/mL
CVT NS 48 hr 1000 ug/mL
CVT NS 48 hr 2000 ug/mL
HT FS 48 hr 500 ug/mL
HT NS 48 hr 500 ug/mL
HT NS 48 hr 1000 ug/mL
Treatment Group

FIG. 9

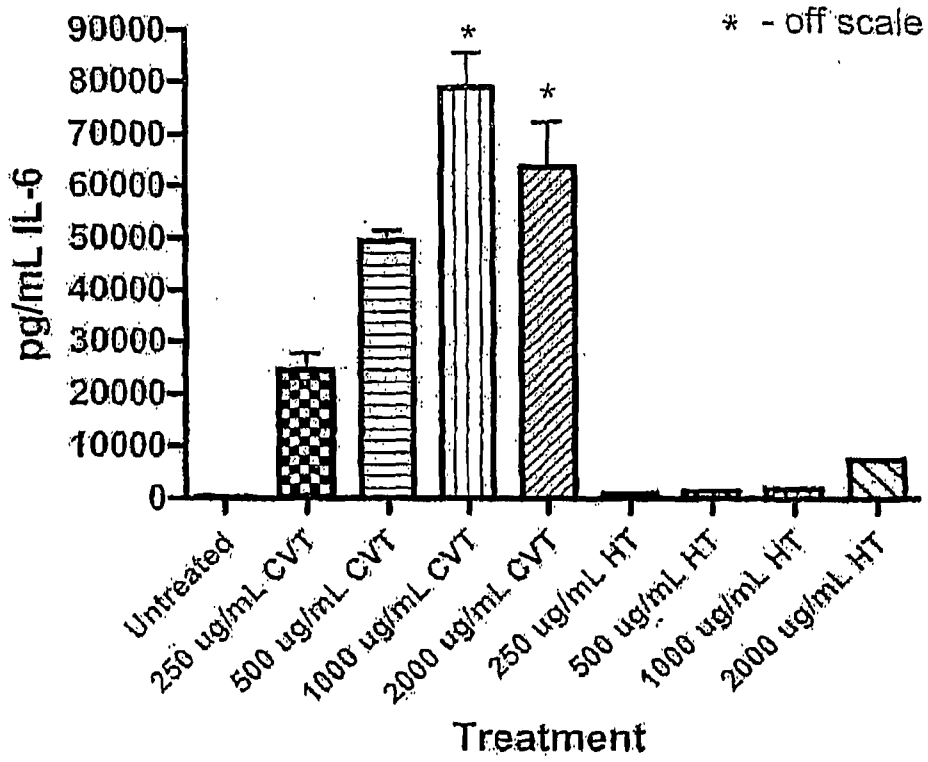

* - off scale
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
pg/mL IL-6
*
*
Untreated
250 ug/mL CVT
500 ug/mL CVT
1000 ug/mL CVT
2000 ug/mL CVT
250 ug/mL HT
500 ug/mL HT
1000 ug/mL HT
2000 ug/mL HT
Treatment

FIG. 10

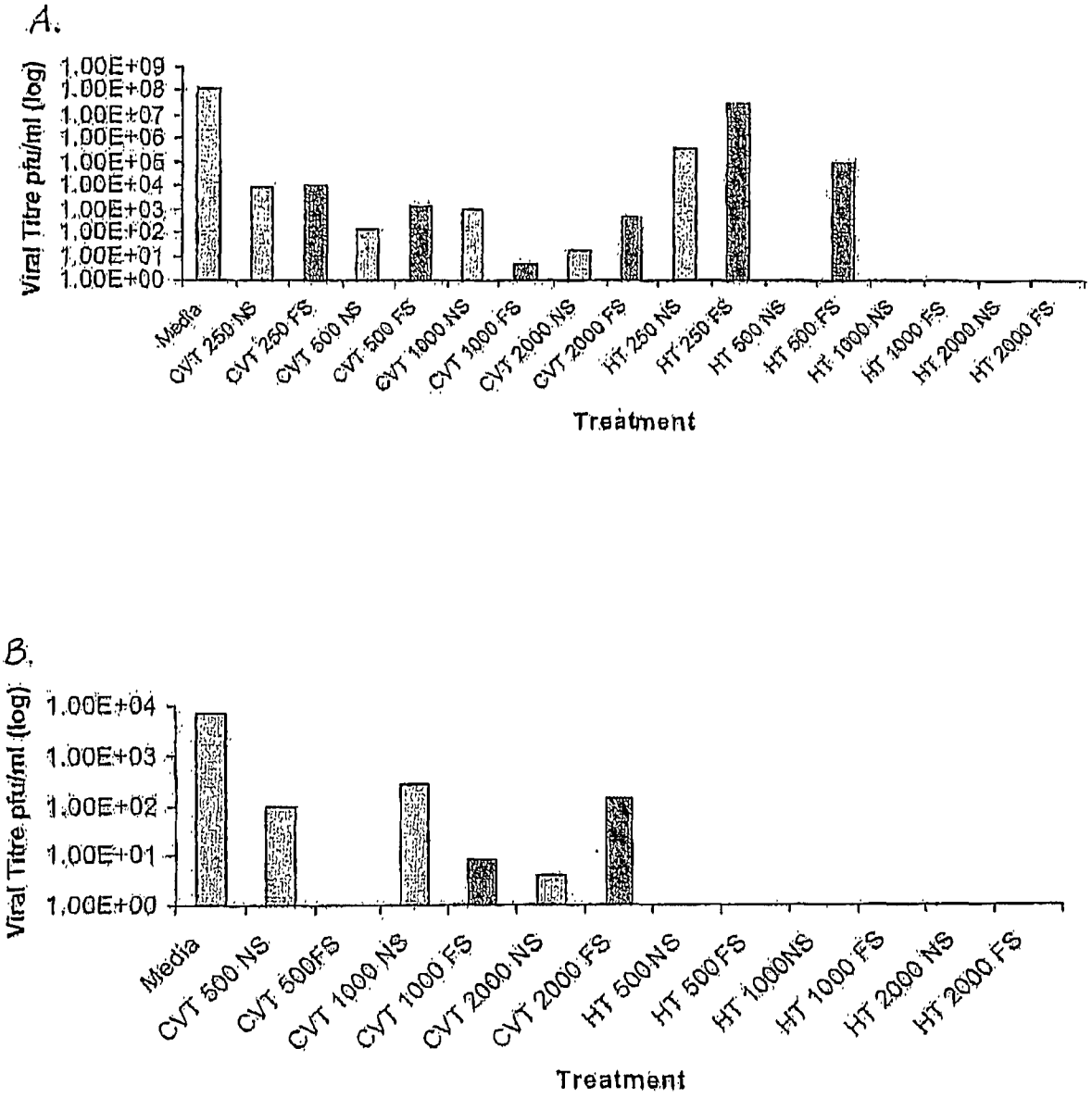

A.
Viral Titre pfu/ml (log)
1.00E+09
1.00E+08
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Media
CVT 250 NS
CVT 250 FS
CVT 500 NS
CVT 500 FS
CVT 1000 NS
CVT 1000 FS
CVT 2000 NS
CVT 2000 FS
HT 250 NS
HT 250 FS
HT 500 NS
HT 500 FS
HT 1000 NS
HT 1000 FS
HT 2000 NS
HT 2000 FS
Treatment
B.
Viral Titre pfu/ml (log)
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
Media
CVT 500 NS
CVT 500FS
CVT 1000 NS
CVT 1000 FS
CVT 2000 NS
CVT 2000 FS
HT 500NS
HT 500FS
HT 1000NS
HT 1000 FS
HT 2000 NS
HT 2000 FS
Treatment

FIG. 11

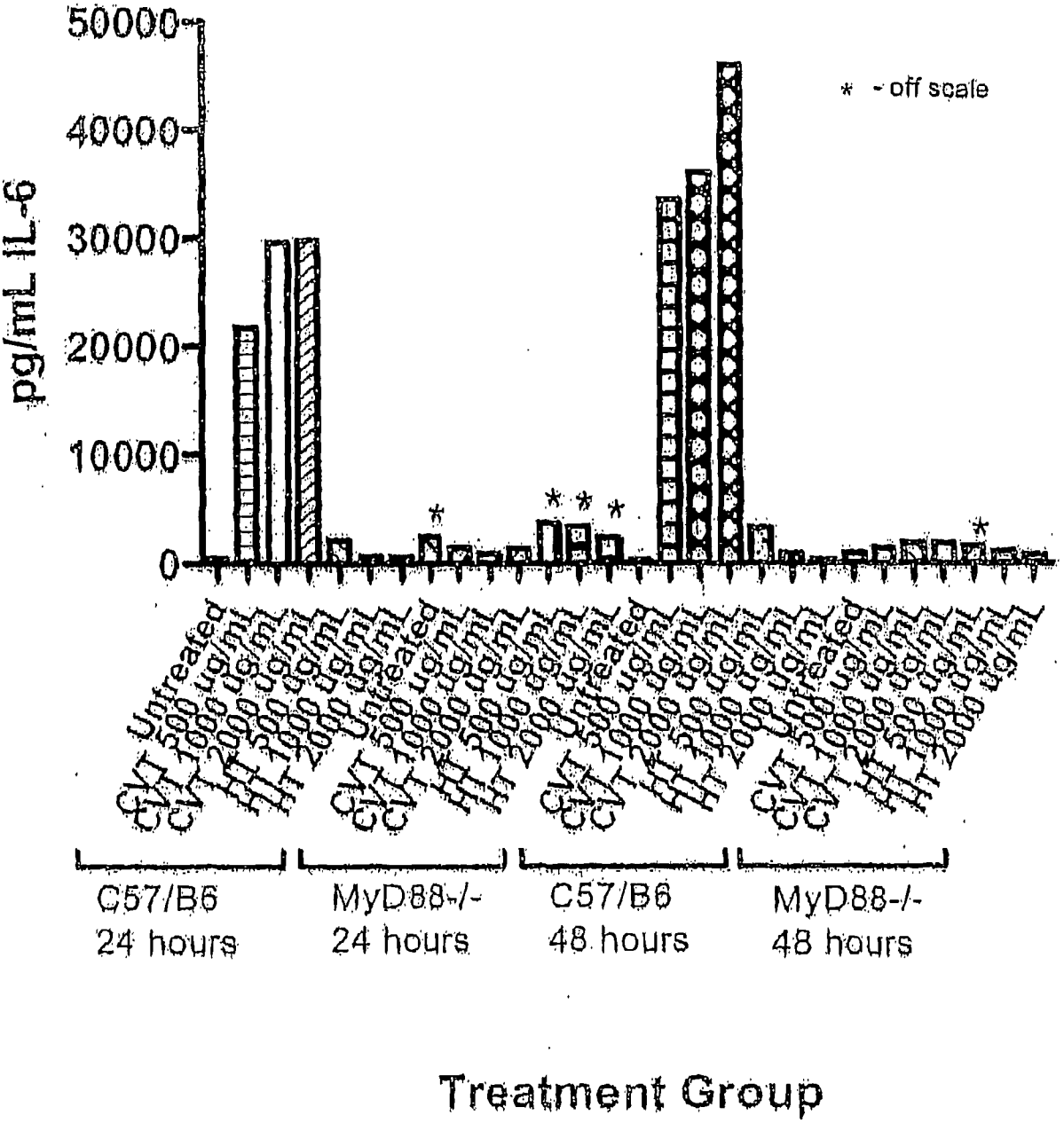

50000
40000
30000
20000
10000
0
pg/mL IL-6
* - off scale
Untreated
CVT 500 ug/ml
CVT 1000 ug/ml
CVT 2000 ug/ml
HT 500 ug/ml
HT 1000 ug/ml
HT 2000 ug/ml
C57/B6 24 hours
MyD88-/- 24 hours
C57/B6 48 hours
MyD88-/- 48 hours
Treatment Group

FIG. 12

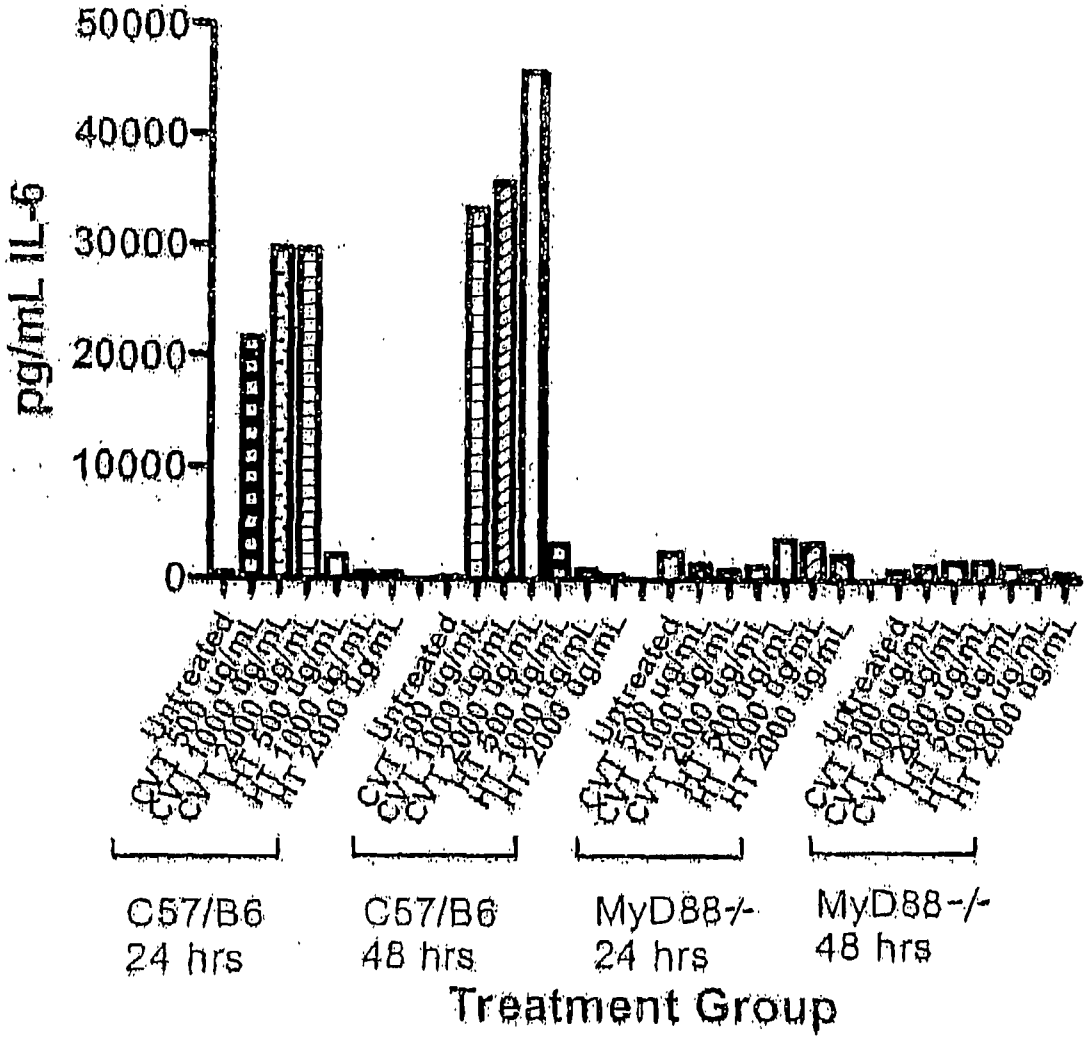

50000
40000
30000
20000
10000
0
pg/mL IL-6
Untreated
CVT 500 ug/ml
CVT 1000 ug/ml
HT 500 ug/ml
HT 1000 ug/ml
HT 2000 ug/ml
C57/B6 24 hrs
C57/B6 48 hrs
MyD88-/- 24 hrs
MyD88-/- 48 hrs
Treatment Group

FIG. 13A

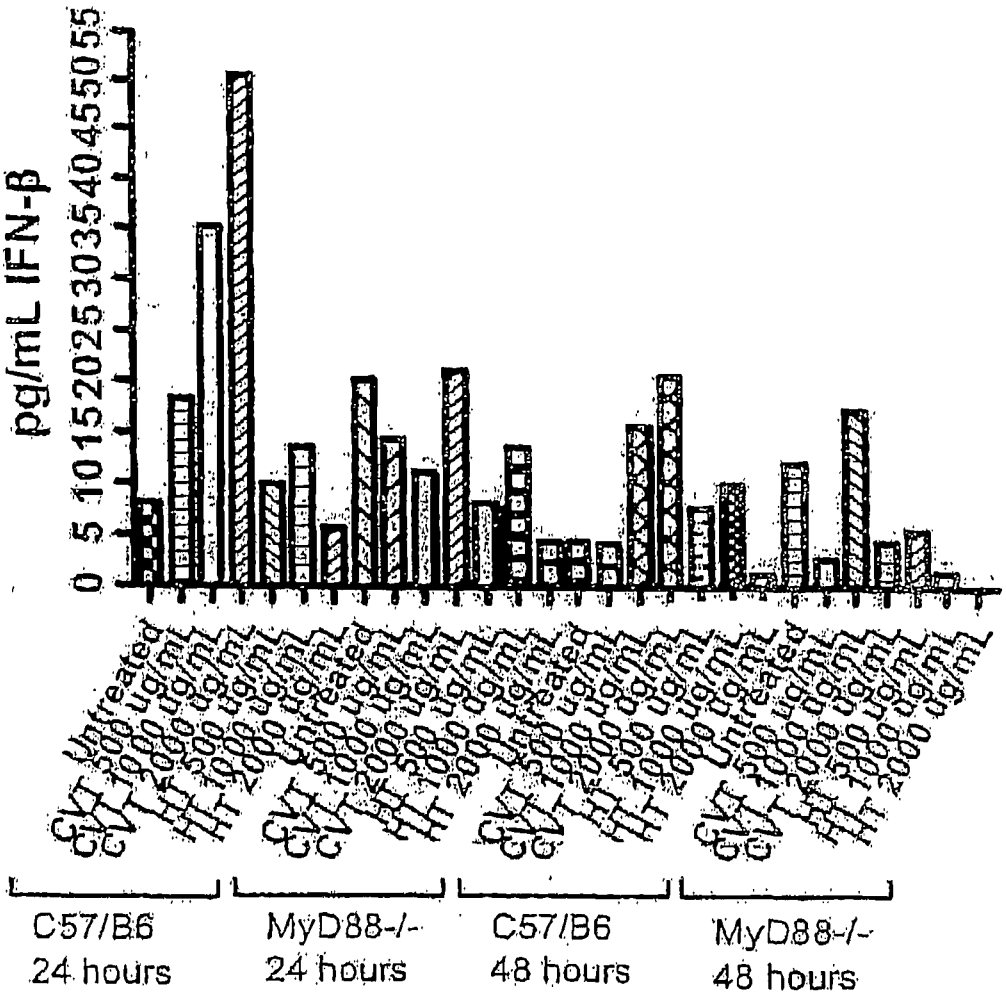

pg/mL IFN-β
0 5 10 15 20 25 30 35 40 45 50 55
CVT Untreated
CVT 500 ug/ml
CVT 1000 ug/ml
CVT 2000 ug/ml
Hr 500 ug/ml
Hr 1000 ug/ml
Hr 2000 ug/ml
C57/B6 24 hours
MyD88-/- 24 hours
C57/B6 48 hours
MyD88-/- 48 hours
Treatment Group

FIG. 13B

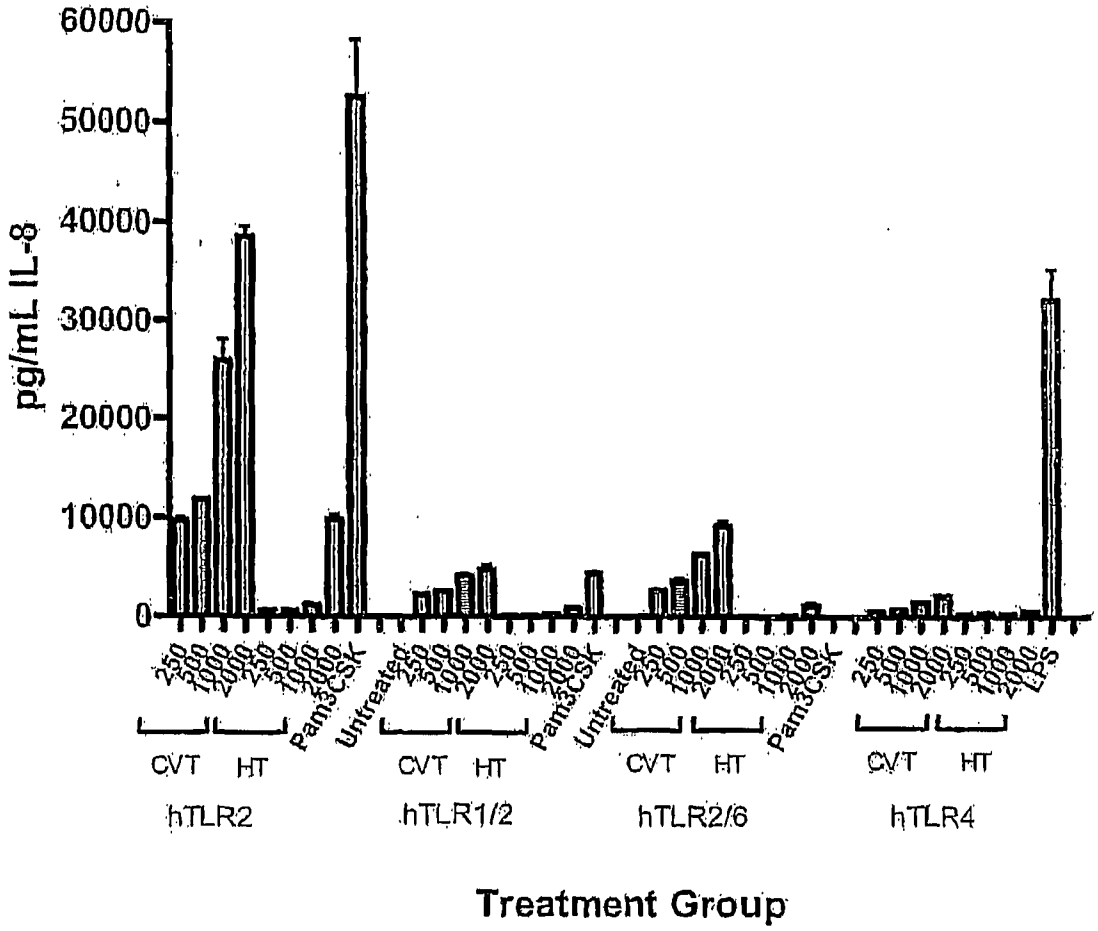

60000
50000
40000
30000
20000
10000
0
pg/mL IL-8
250
500
1000
2000
Pam3CSK
Untreated
LPS
CVT
HT
hTLR2
hTLR1/2
hTLR2/6
hTLR4
Treatment Group

FIG. 14

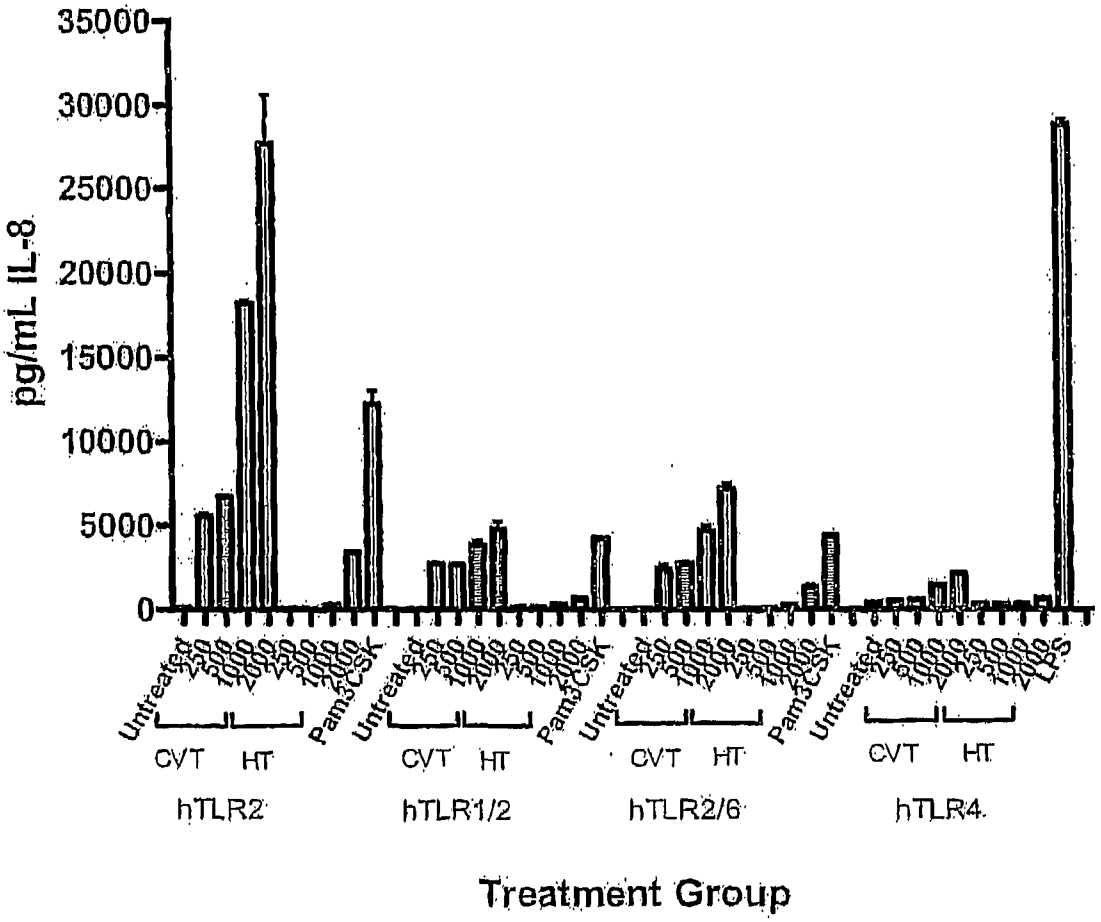

35000
30000
25000
20000
15000
10000
5000
0
pg/mL IL-8
Untreated
250
500
1000
2000
3000
Pam3CSK
LPS
CVT
HT
hTLR2
hTLR1/2
hTLR2/6
hTLR4
Treatment Group

FIG. 15

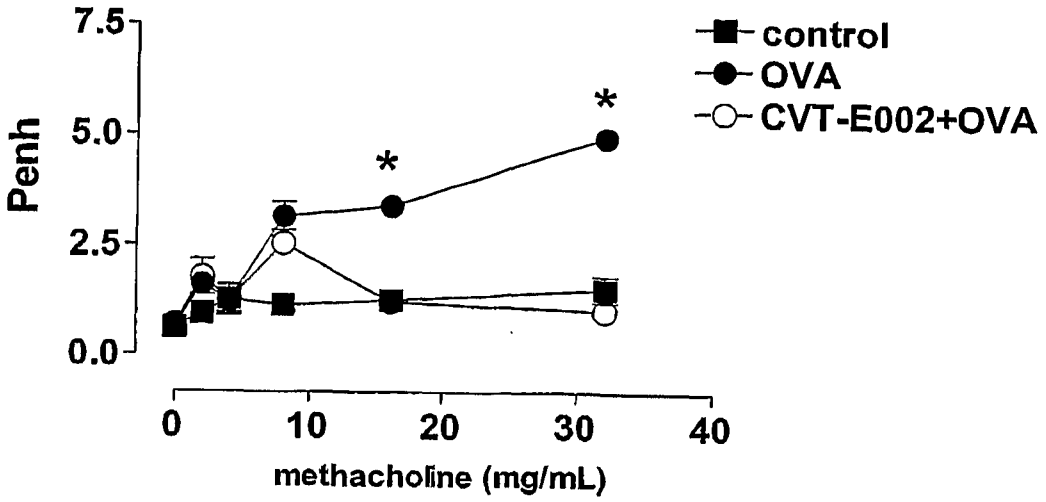


FIG. 16A

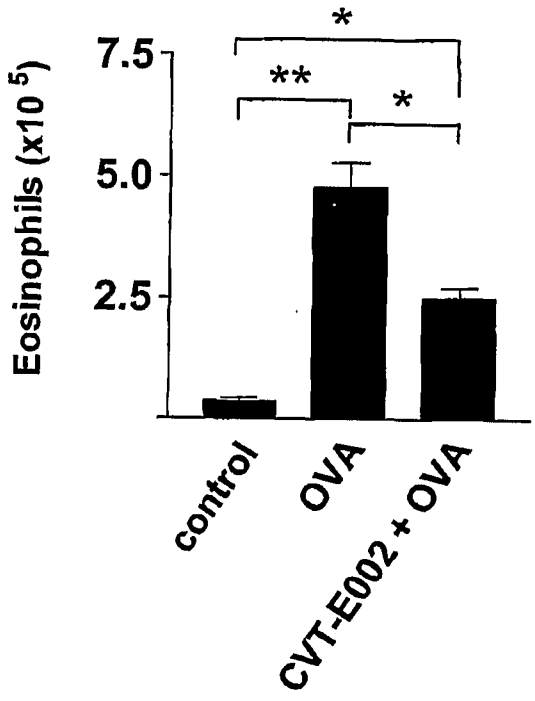


FIG. 16B

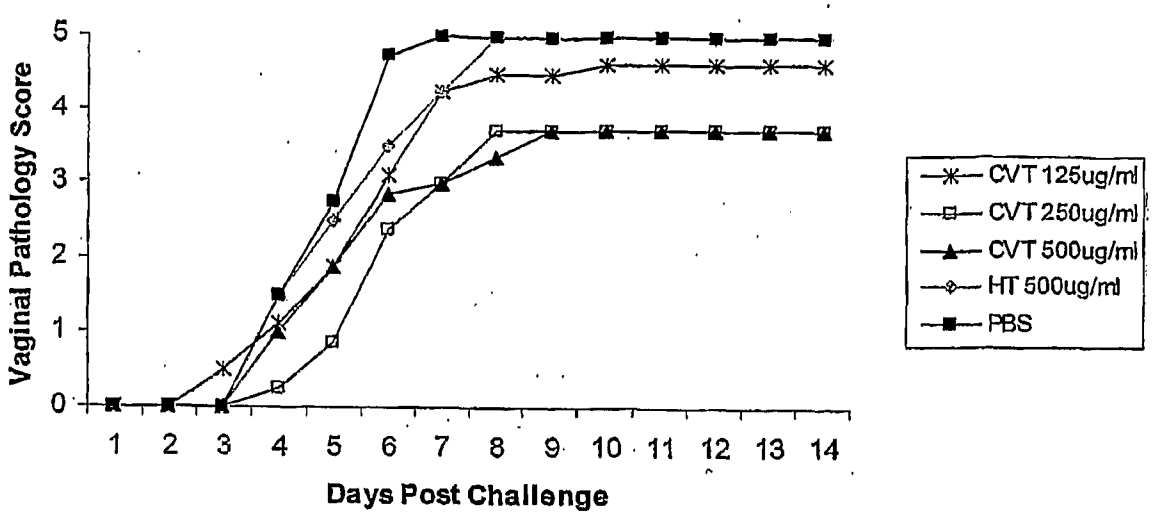


FIG. 17A

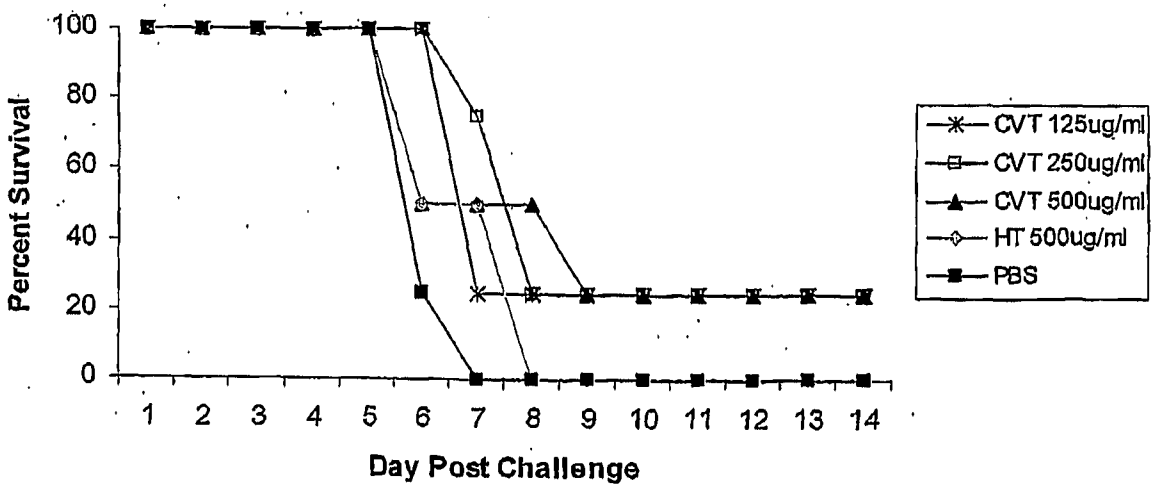


FIG. 17B