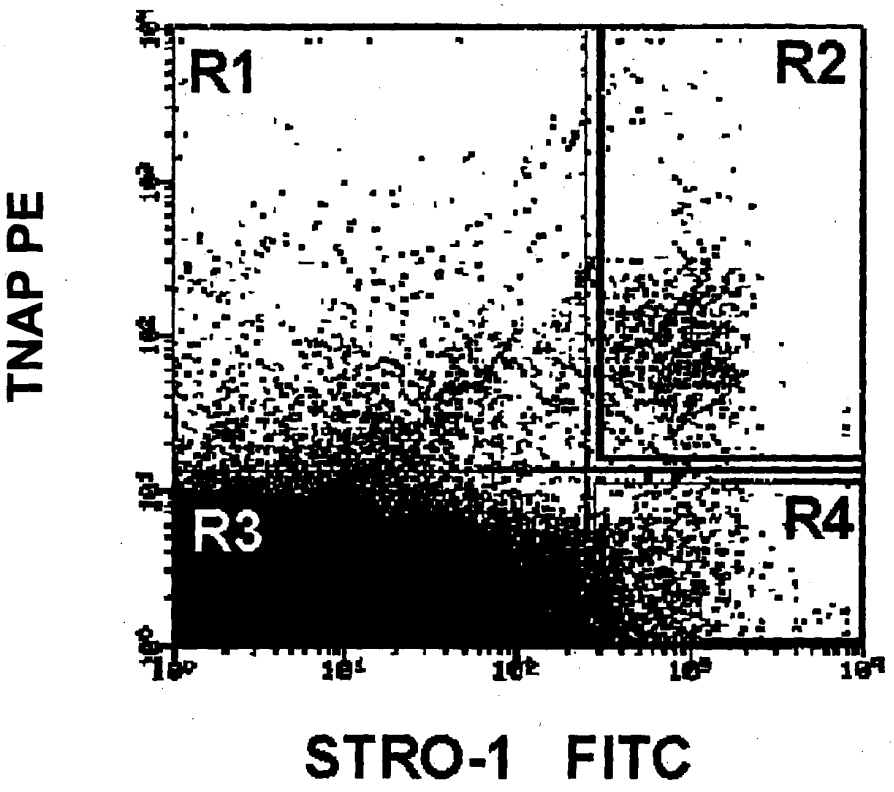
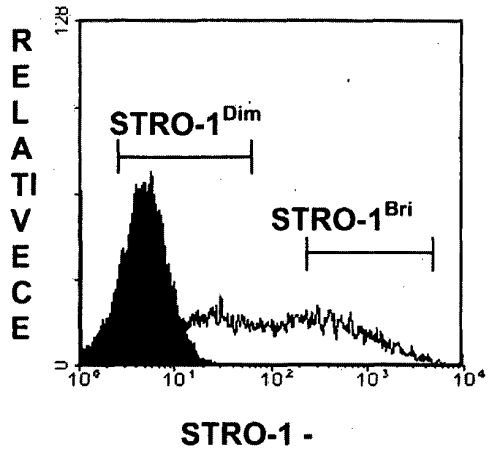


Figure 1

A


RELATIVE CELL NUMBER
STRO-1Dim
STRO-1Bri
10⁰
10¹
10²
10³
10⁴
STRO-1 -

B

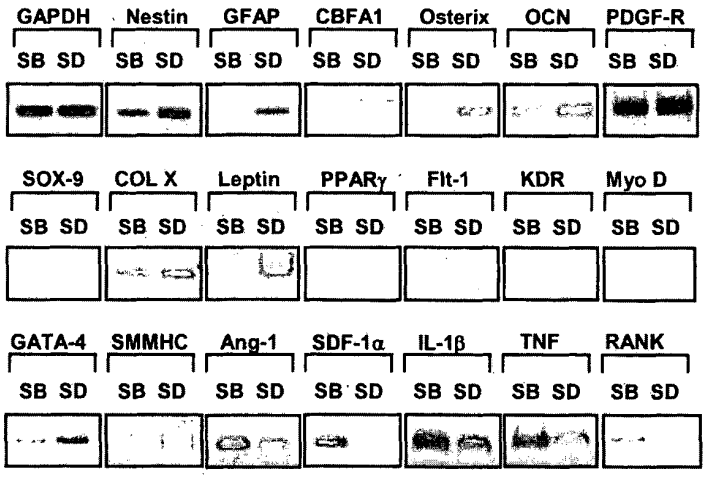

GAPDH
Nestin
GFAP
CBFA1
Osterix
OCN
PDGF-R
SOX-9
COL X
Leptin
PPARγ
Flt-1
KDR
Myo D
GATA-4
SMMHC
Ang-1
SDF-1α
IL-1β
TNF
RANK
SB SD

Figure 2

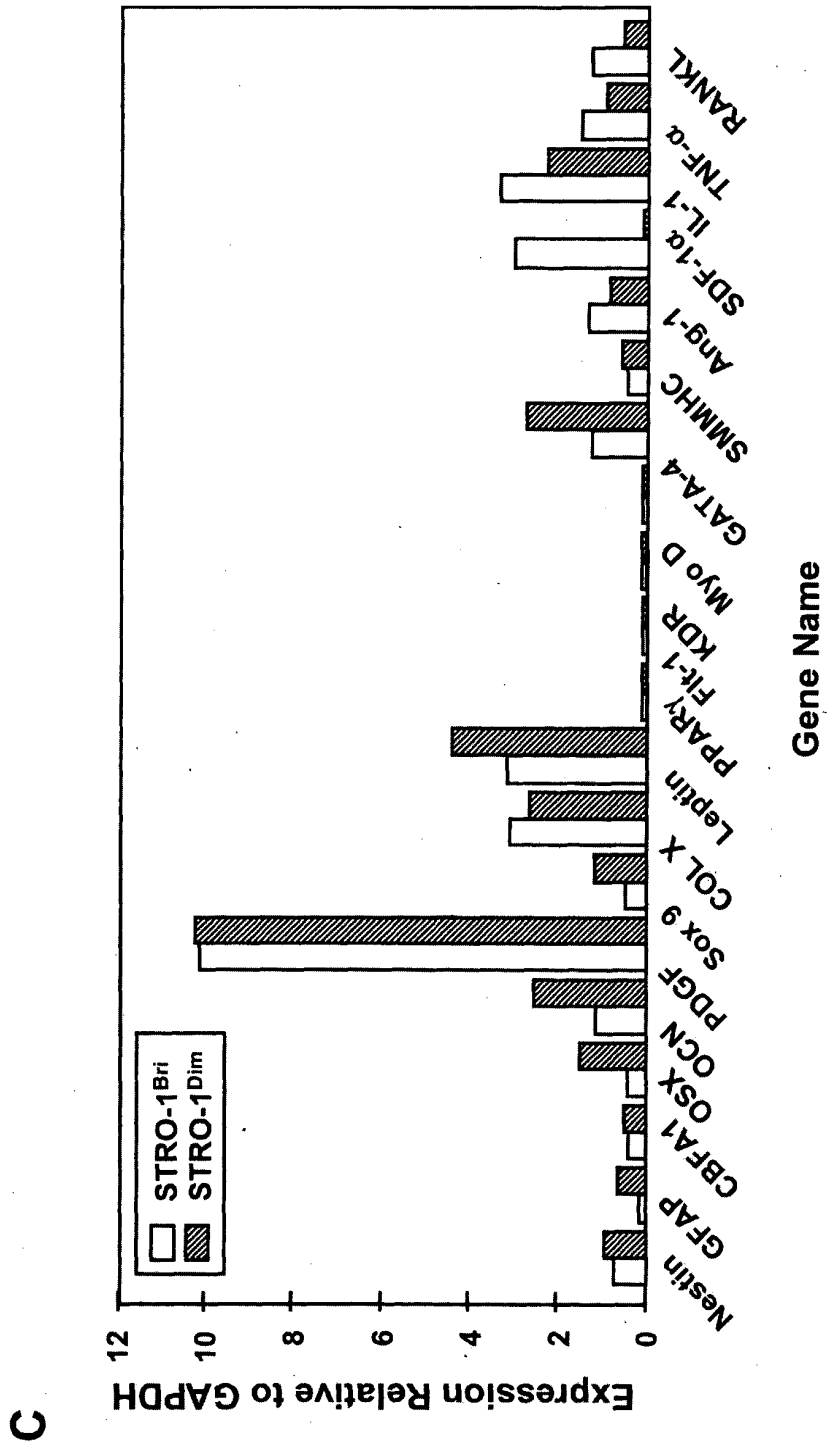


Figure 2 (continued)

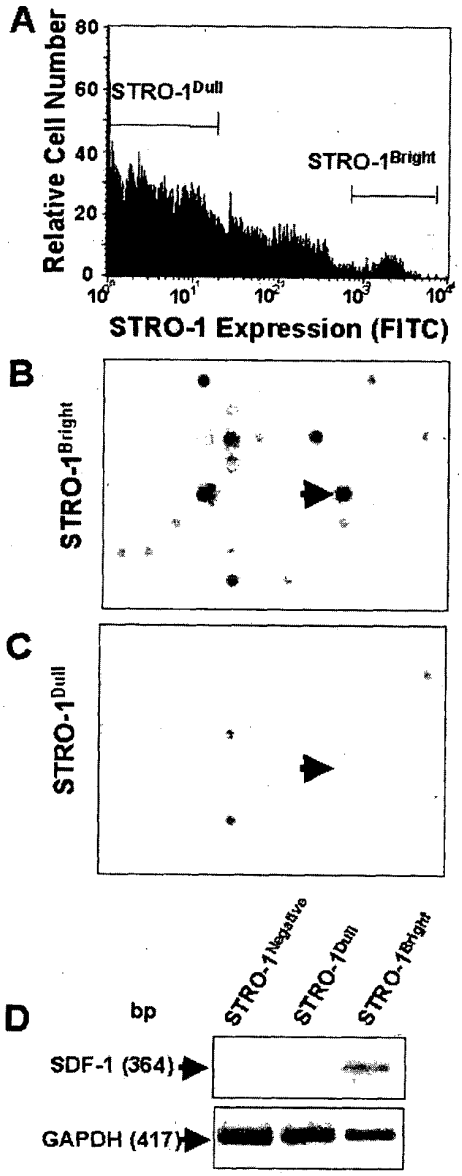

A
Relative Cell Number
80
60
40
20
0
STRO-1Dull
STRO-1Bright
STRO-1 Expression (FITC)
B
STRO-1Bright
C
STRO-1Dull
D
bp
STRO-1Negative
STRO-1Dull
STRO-1Bright
SDF-1 (364)
GAPDH (417)

Figure 3

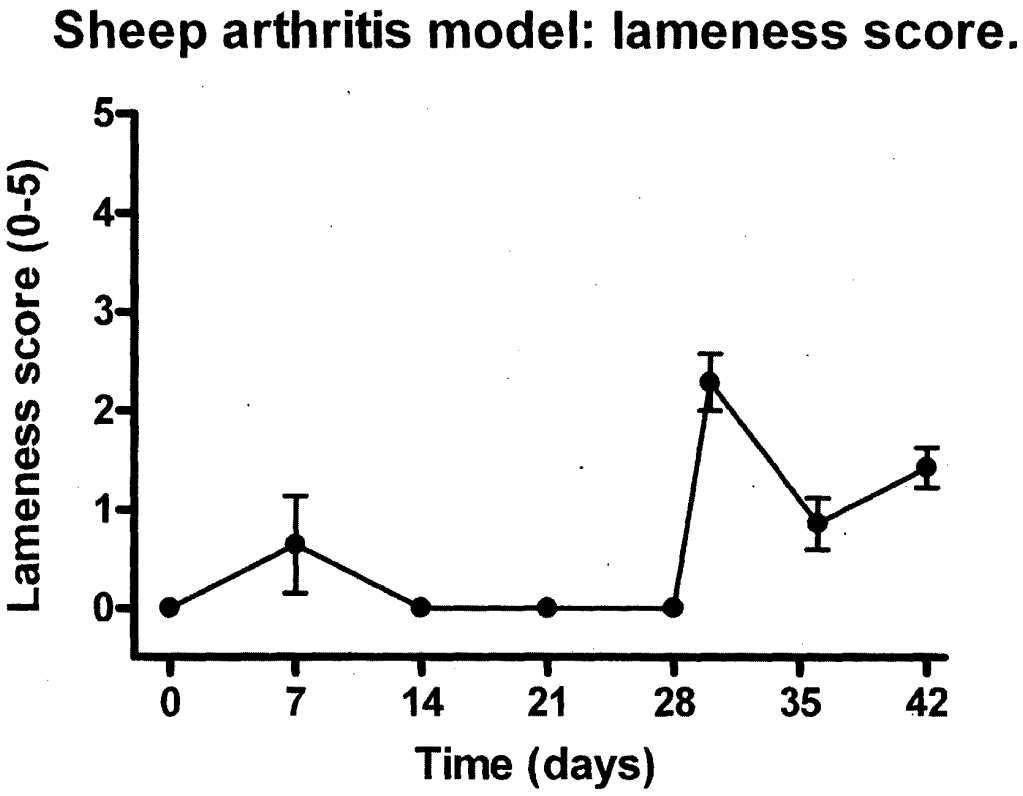

Sheep arthritis model: lameness score.
Lameness score (0-5)
5
4
3
2
1
0
0
7
14
21
28
35
42
Time (days)

Figure 4

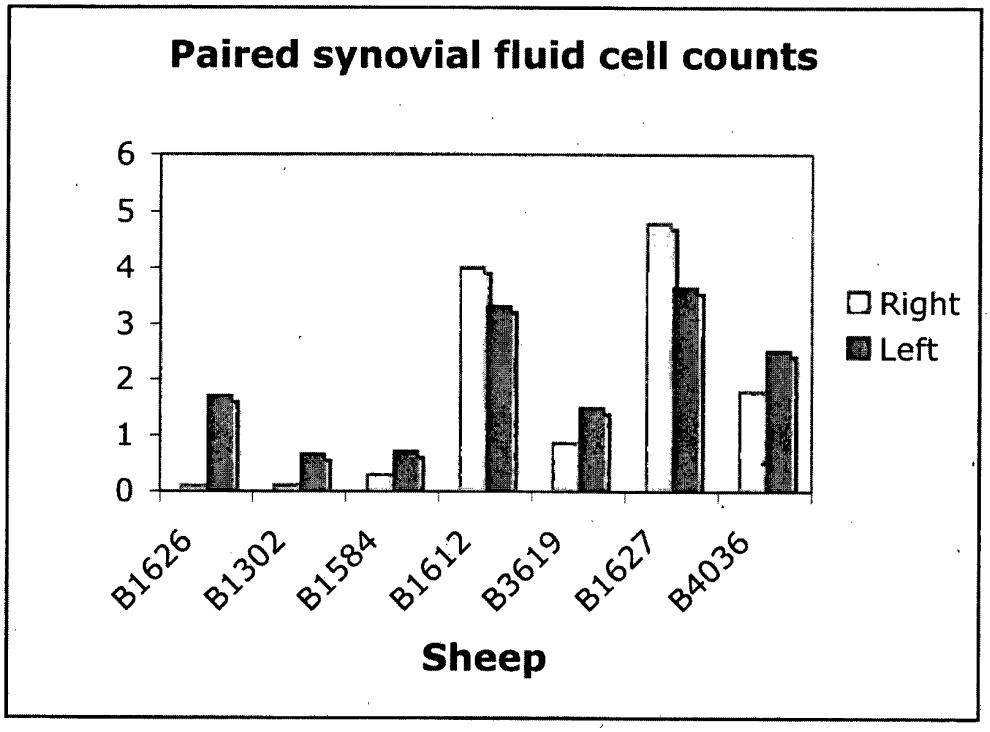

Paired synovial fluid cell counts
6
5
4
3
2
1
0
B1626
B1302
B1584
B1612
B3619
B1627
B4036
Sheep
Right
Left

Figure 5

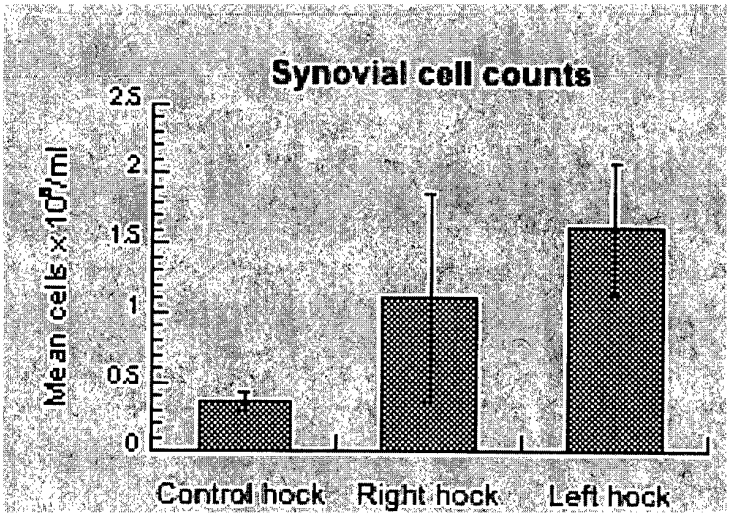
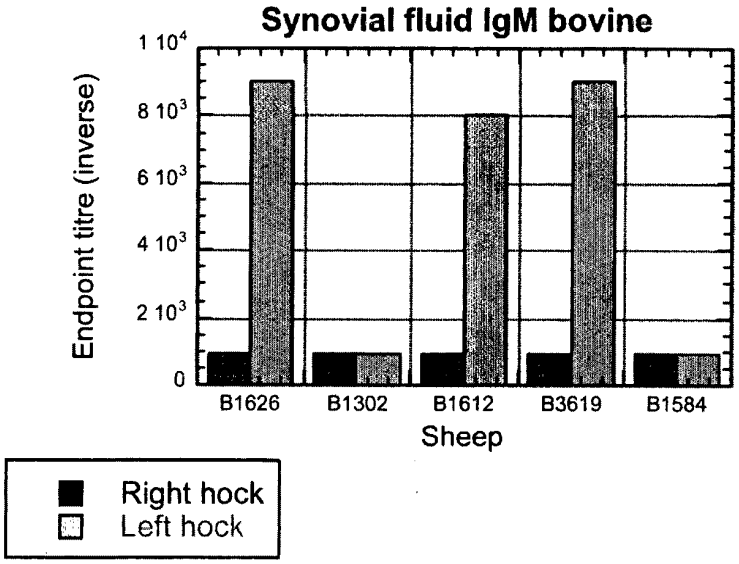

Synovial cell counts
Mean cells x 10⁶/ml
2.5
2
1.5
1
0.5
0
Control hock
Right hock
Left hock

Figure 6


Synovial fluid IgM bovine
Endpoint titre (inverse)
1 10^4
8 10^3
6 10^3
4 10^3
2 10^3
0
B1626
B1302
B1612
B3619
B1584
Sheep
Right hock
Left hock

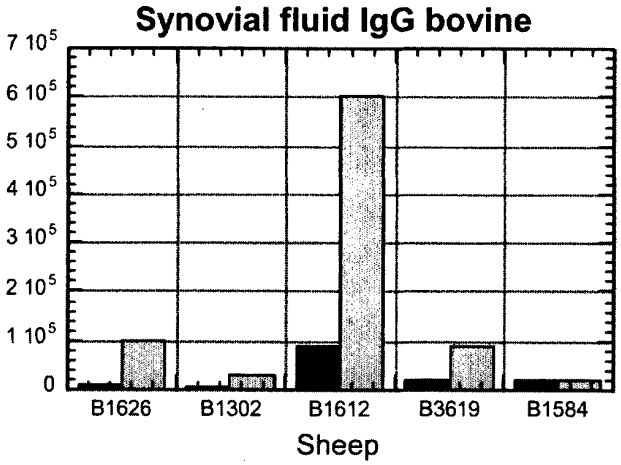

Synovial fluid IgG bovine
7 10^5
6 10^5
5 10^5
4 10^5
3 10^5
2 10^5
1 10^5
0
B1626
B1302
B1612
B3619
B1584
Sheep

Figure 7A

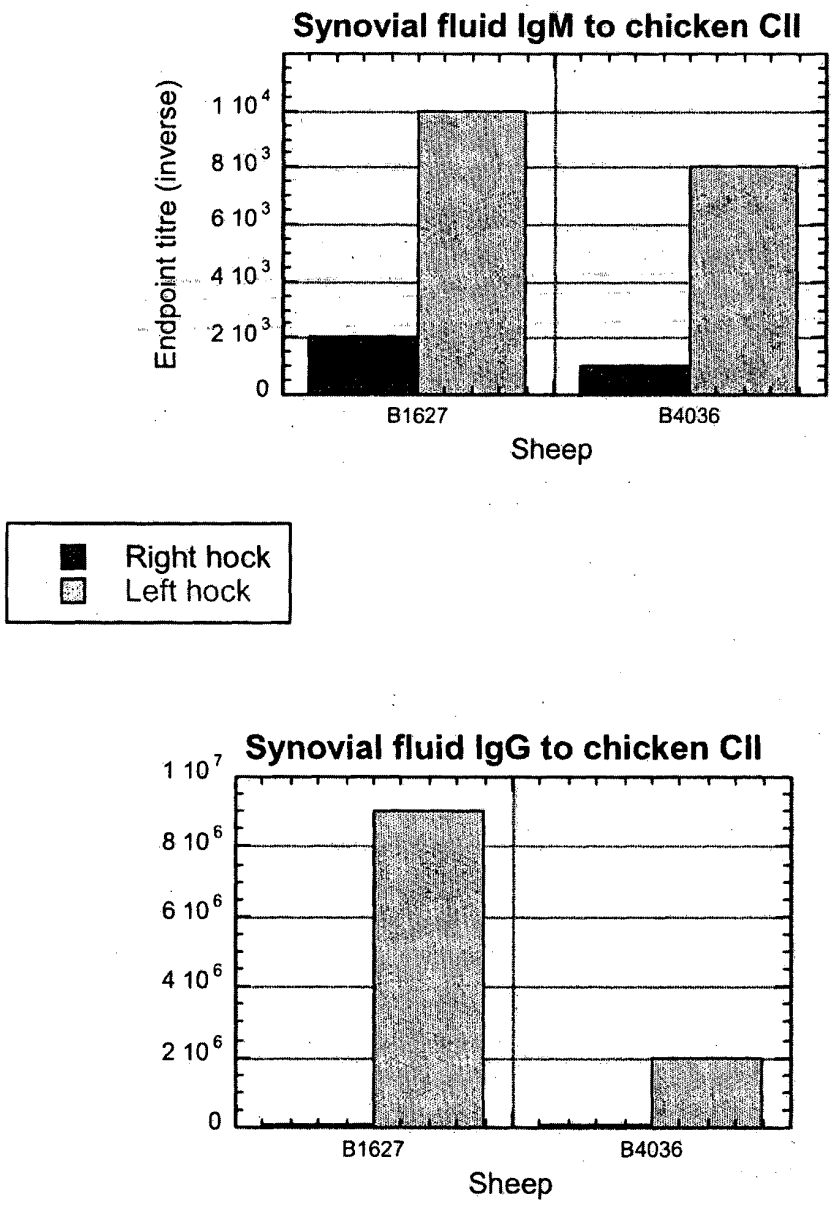

Synovial fluid IgM to chicken CII
Endpoint titre (inverse)
1 10^4
8 10^3
6 10^3
4 10^3
2 10^3
0
B1627
B4036
Sheep
Right hock
Left hock
Synovial fluid IgG to chicken CII
1 10^7
8 10^6
6 10^6
4 10^6
2 10^6
0
B1627
B4036
Sheep

Figure 7B

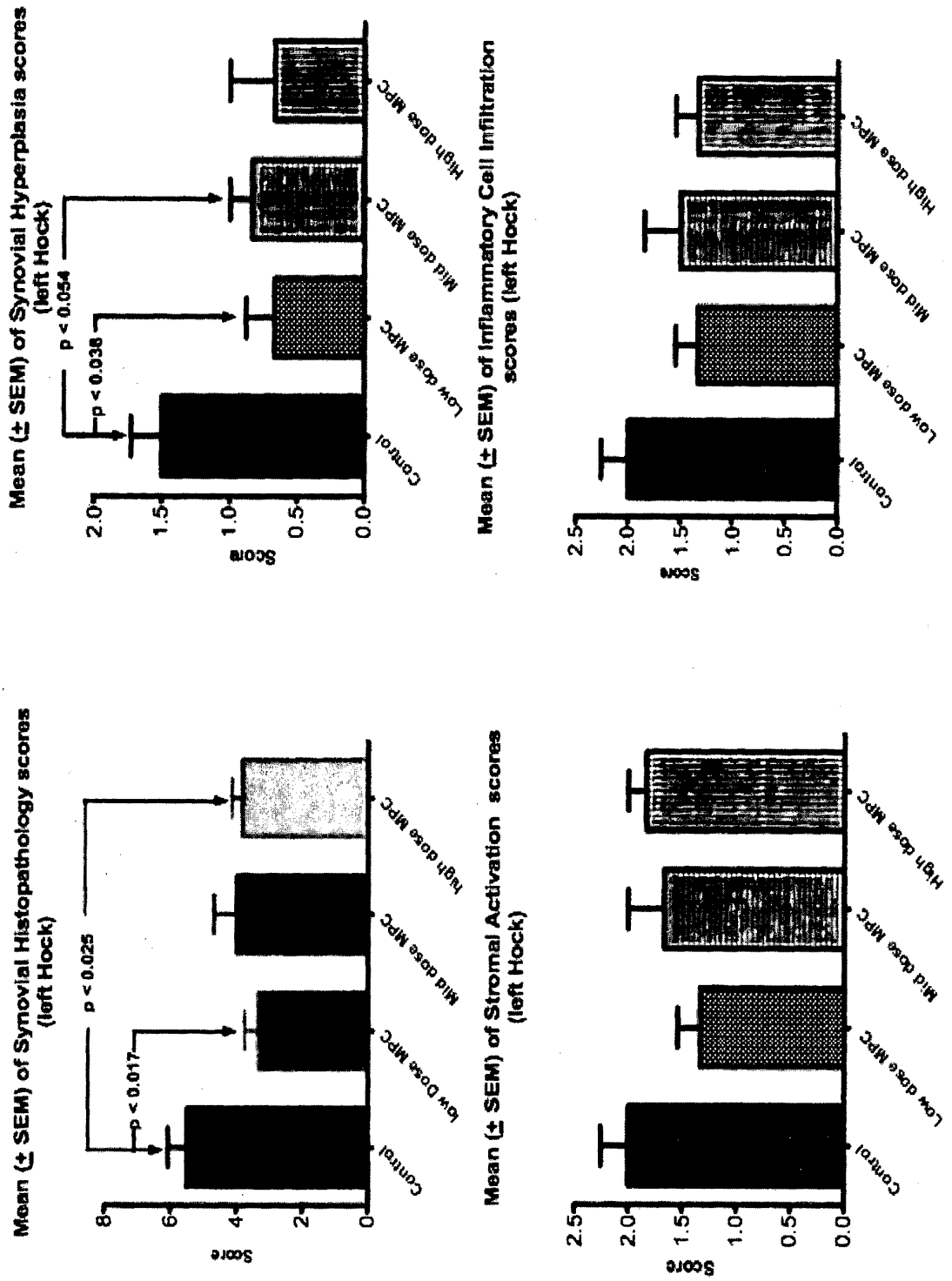

Mean (± SEM) of Synovial Hyperplasia scores (left Hock)
p < 0.054
p < 0.038
Score
2.0
1.5
1.0
0.5
0.0
Control
Low dose MPC
Mid dose MPC
High dose MPC
Mean (± SEM) of Inflammatory Cell Infiltration scores (left Hock)
Score
2.5
2.0
1.5
1.0
0.5
0.0
Control
Low dose MPC
Mid dose MPC
High dose MPC
Mean (± SEM) of Synovial Histopathology scores (left Hock)
p < 0.025
p < 0.017
Score
8
6
4
2
0
Control
low Dose MPC
Mid dose MPC
high dose MPC
Mean (± SEM) of Stromal Activation scores (left Hock)
Score
2.5
2.0
1.5
1.0
0.5
0.0
Control
Low dose MPC
Mid dose MPC
High dose MPC

Figure 8A

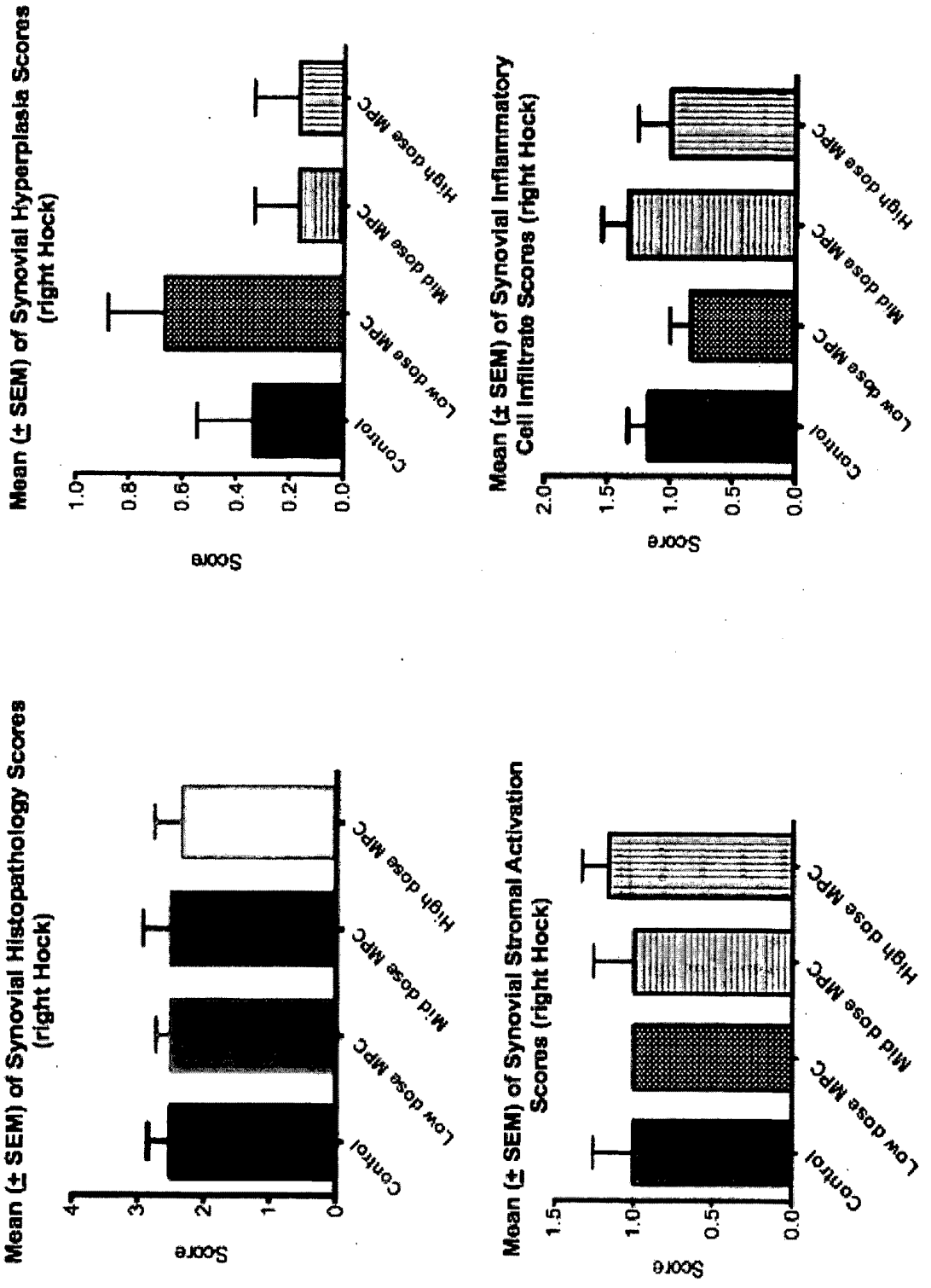

Mean (± SEM) of Synovial Hyperplasia Scores (right Hock)
Score
1.0
0.8
0.6
0.4
0.2
0.0
Control
Low dose MPC
Mid dose MPC
High dose MPC
Mean (± SEM) of Synovial Inflammatory Cell Infiltrate Scores (right Hock)
Score
2.0
1.5
1.0
0.5
0.0
Control
Low dose MPC
Mid dose MPC
High dose MPC
Mean (± SEM) of Synovial Histopathology Scores (right Hock)
Score
4
3
2
1
0
Control
Low dose MPC
Mid dose MPC
High dose MPC
Mean (± SEM) of Synovial Stromal Activation Scores (right Hock)
Score
1.5
1.0
0.5
0.0
Control
Low dose MPC
Mid dose MPC
High dose MPC

Figure 8B

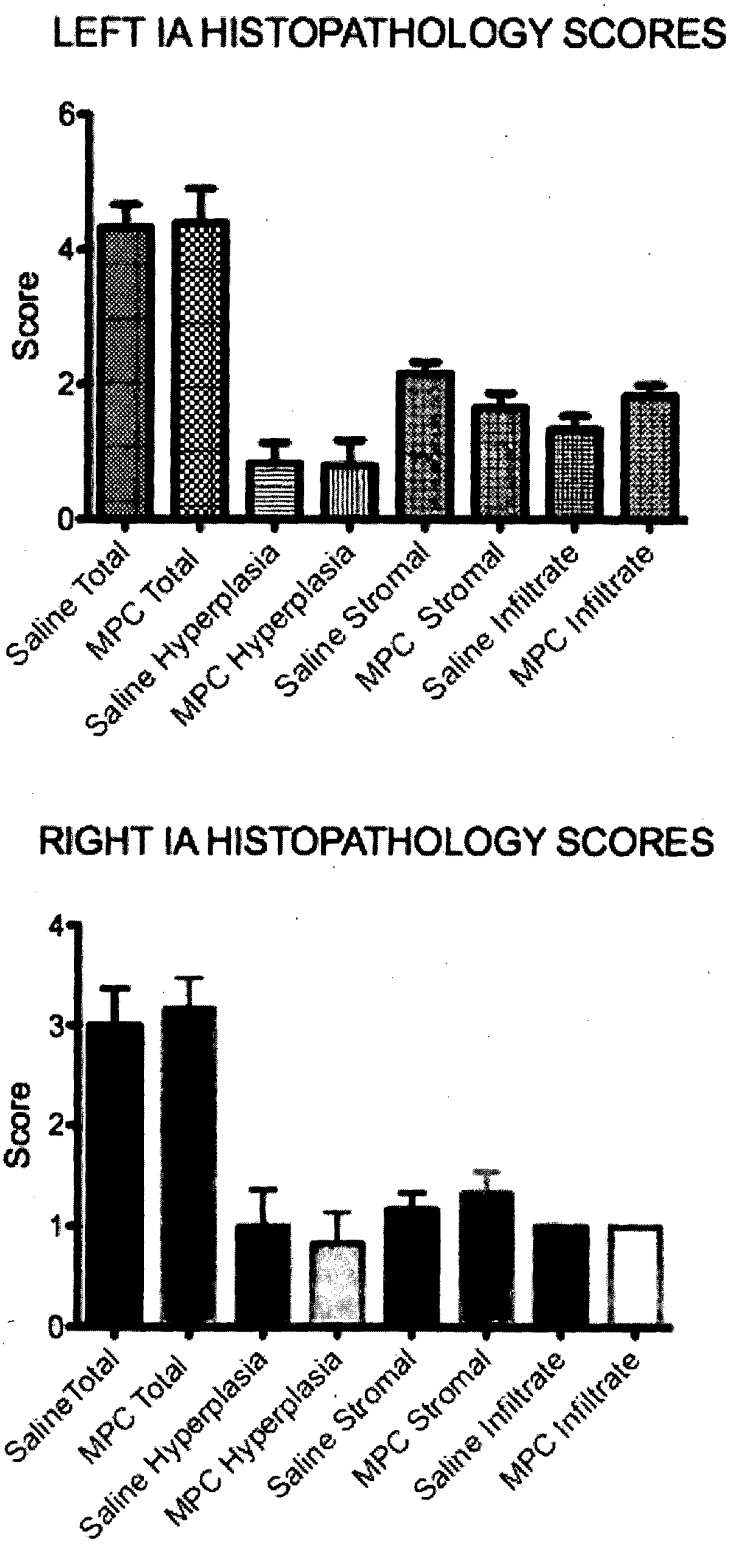

LEFT IA HISTOPATHOLOGY SCORES
Score
6
4
2
0
Saline Total
MPC Total
Saline Hyperplasia
MPC Hyperplasia
Saline Stromal
MPC Stromal
Saline Infiltrate
MPC Infiltrate
RIGHT IA HISTOPATHOLOGY SCORES
Score
4
3
2
1
0
SalineTotal
MPC Total
Saline Hyperplasia
MPC Hyperplasia
Saline Stromal
MPC Stromal
Saline Infiltrate
MPC Infiltrate

Figure 8C

CD14 scoring system
(intima scoring scheme after Mo et al, 2011)

Intima score	% CD14 cells
0	absent
1	1-25%
2	26-50%
3	51-75%
4	76-100%

Figure 9A

Discrete cell scoring scheme applied to CD4, CD8, Gamma-delta TCR, CD79a, and Ki-67

Subset score	Incidence
0	absent
+	A few cells in the entire section
++	Occasional cells or a small cluster
+++	More numerous cells and/or clusters
++++	Numerous individual cells or clusters/large cluster or clusters

Figure 9B

Cytokine and adhesion molecule scoring system applied to VCAM-1, IL-6, IL-10, IL-1β, IL-17, TNF-α, and interstitial CD14

Intima score	Description	Tissue score	Description
0	Unstained	0	Unstained
1	A few, or weakly stained cells	1	A few scattered cells
2	Stronger stained	2	Occasional cells or a small cluster
3	Thickened OR densely stained	3	More numerous cells and/or clusters
4	Thickened AND densely stained	4	Widespread or densely stained cells

Figure 9C

Mean ± SD Immunohistological scores for Left Hock joint synovial tissues for the Control and MPC injected groups

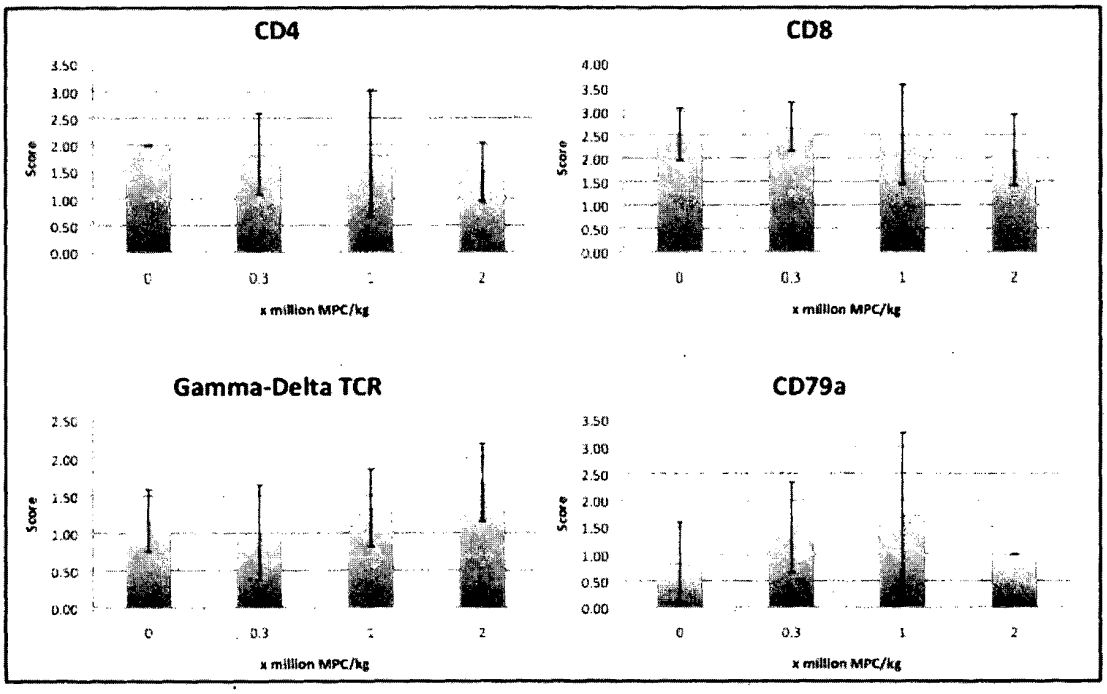


Figure 10A

Mean ± SD Immunohistological scores for Left Hock joint synovial tissues for the Control and MPC injected groups

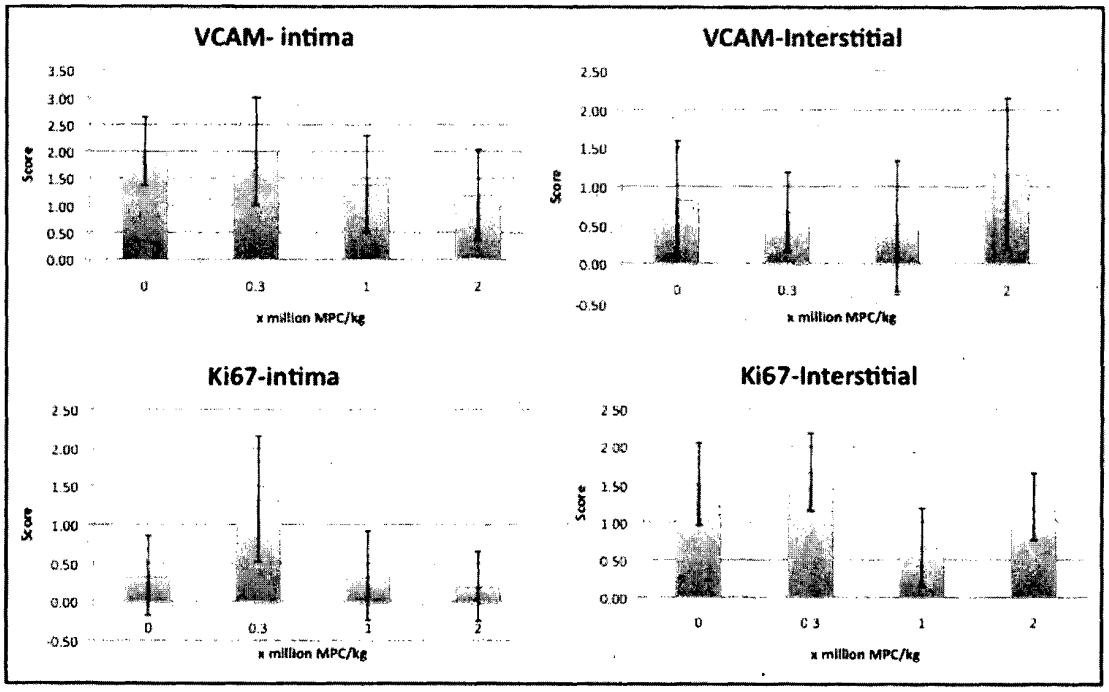


Figure 10B

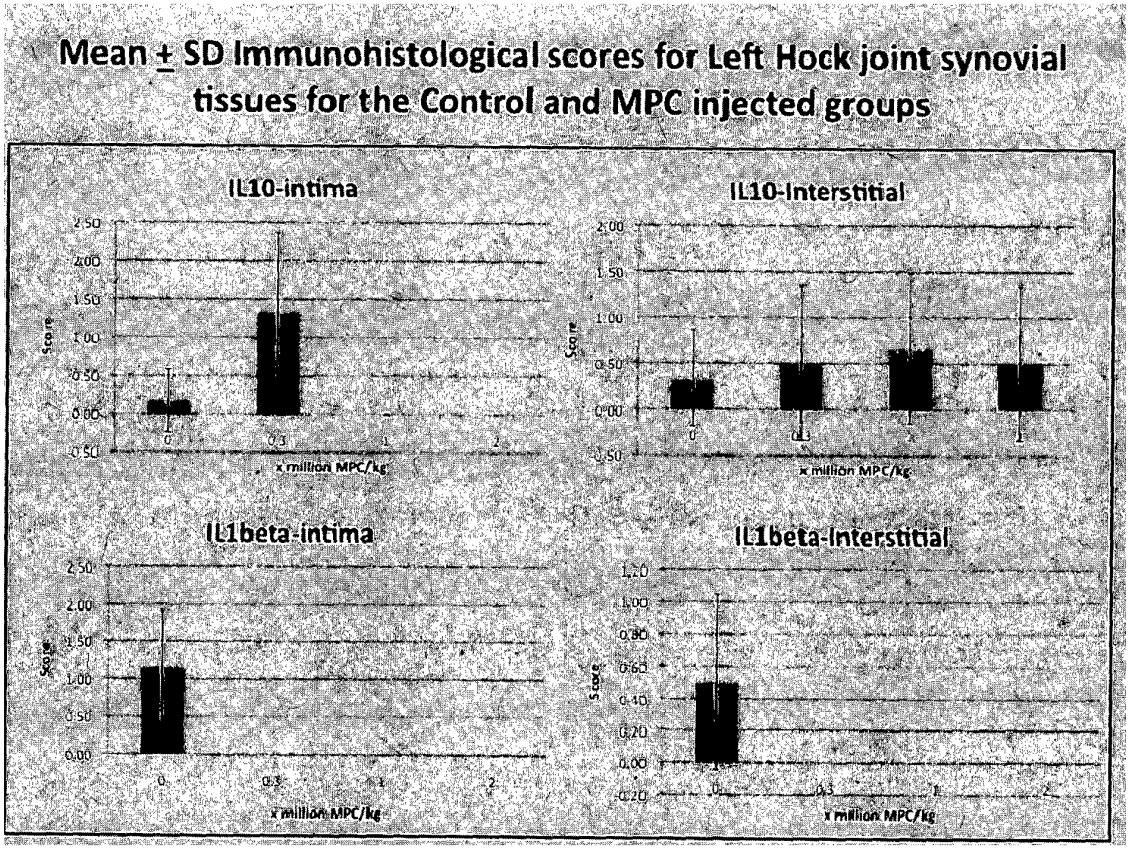

Mean ± SD Immunohistological scores for Left Hock joint synovial tissues for the Control and MPC injected groups
IL10-intima
IL10-Interstitial
IL1beta-intima
IL1beta-Interstitial
Score
x million MPC/kg

Figure 10C

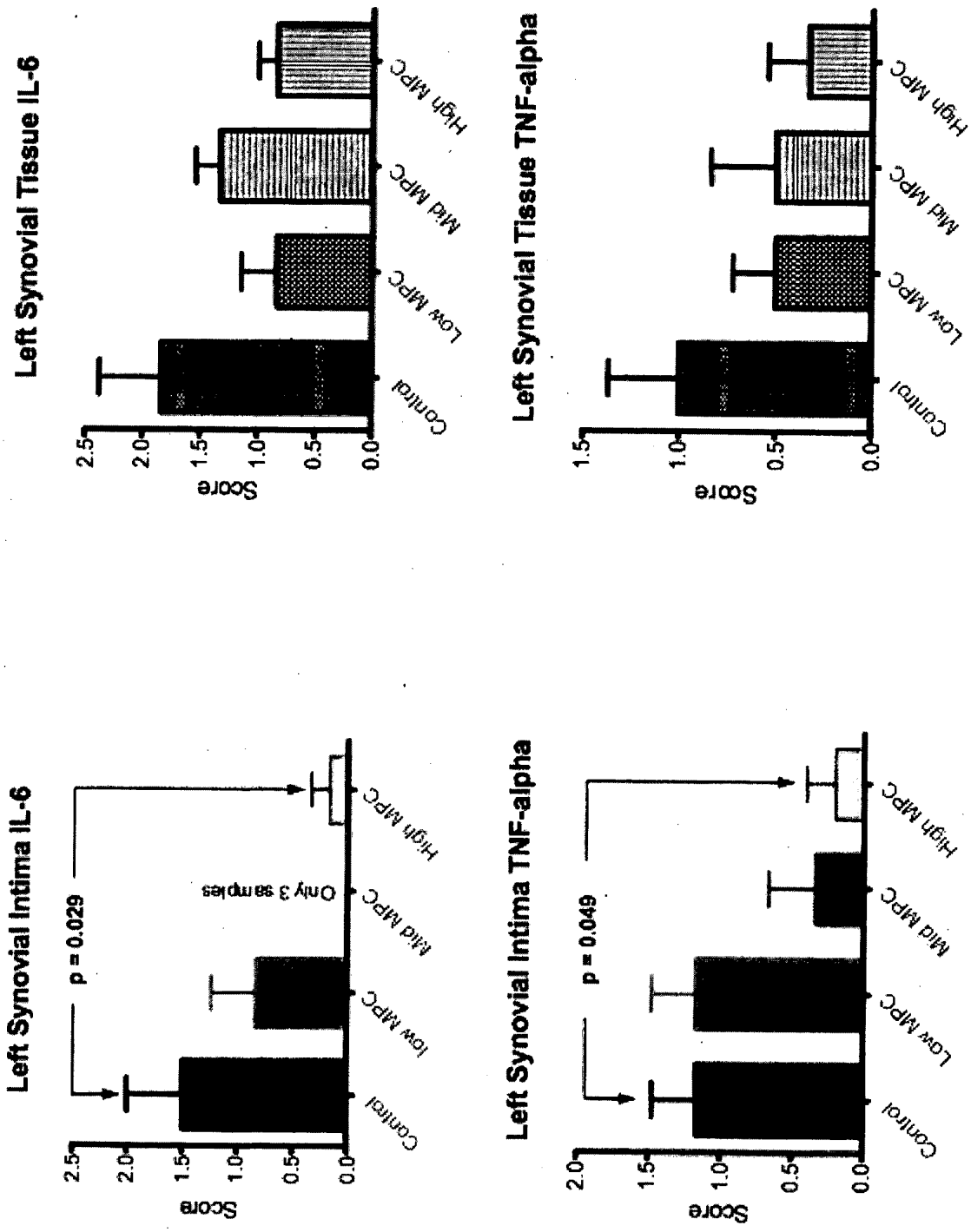

Left Synovial Tissue IL-6
Left Synovial Tissue TNF-alpha
Left Synovial Intima IL-6
Left Synovial Intima TNF-alpha
Score
Control
Low MPC
Mid MPC
High MPC
p = 0.029
p = 0.049
Only 3 samples

Figure 10D

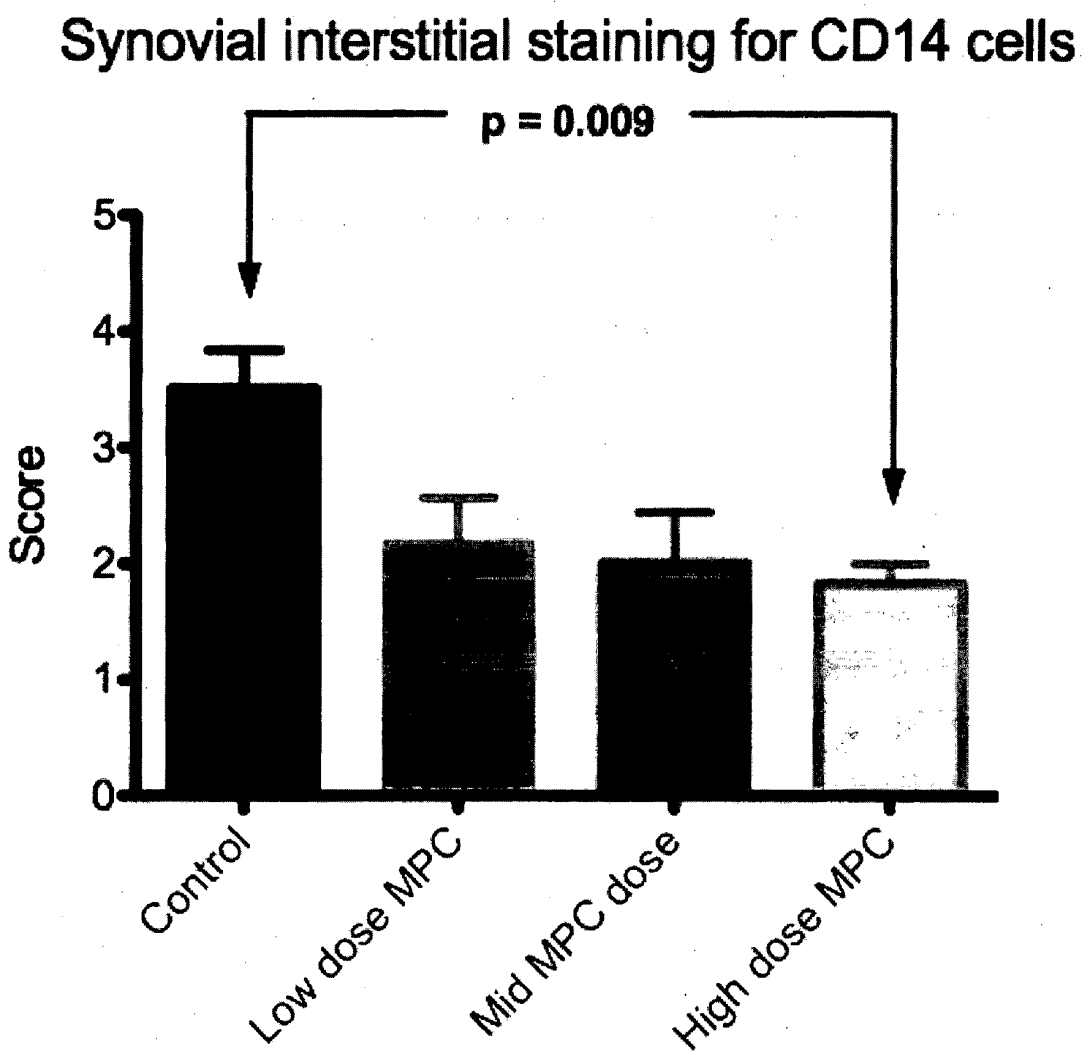

Synovial interstitial staining for CD14 cells
p = 0.009
Score
5
4
3
2
1
0
Control
Low dose MPC
Mid MPC dose
High dose MPC

Figure 10E

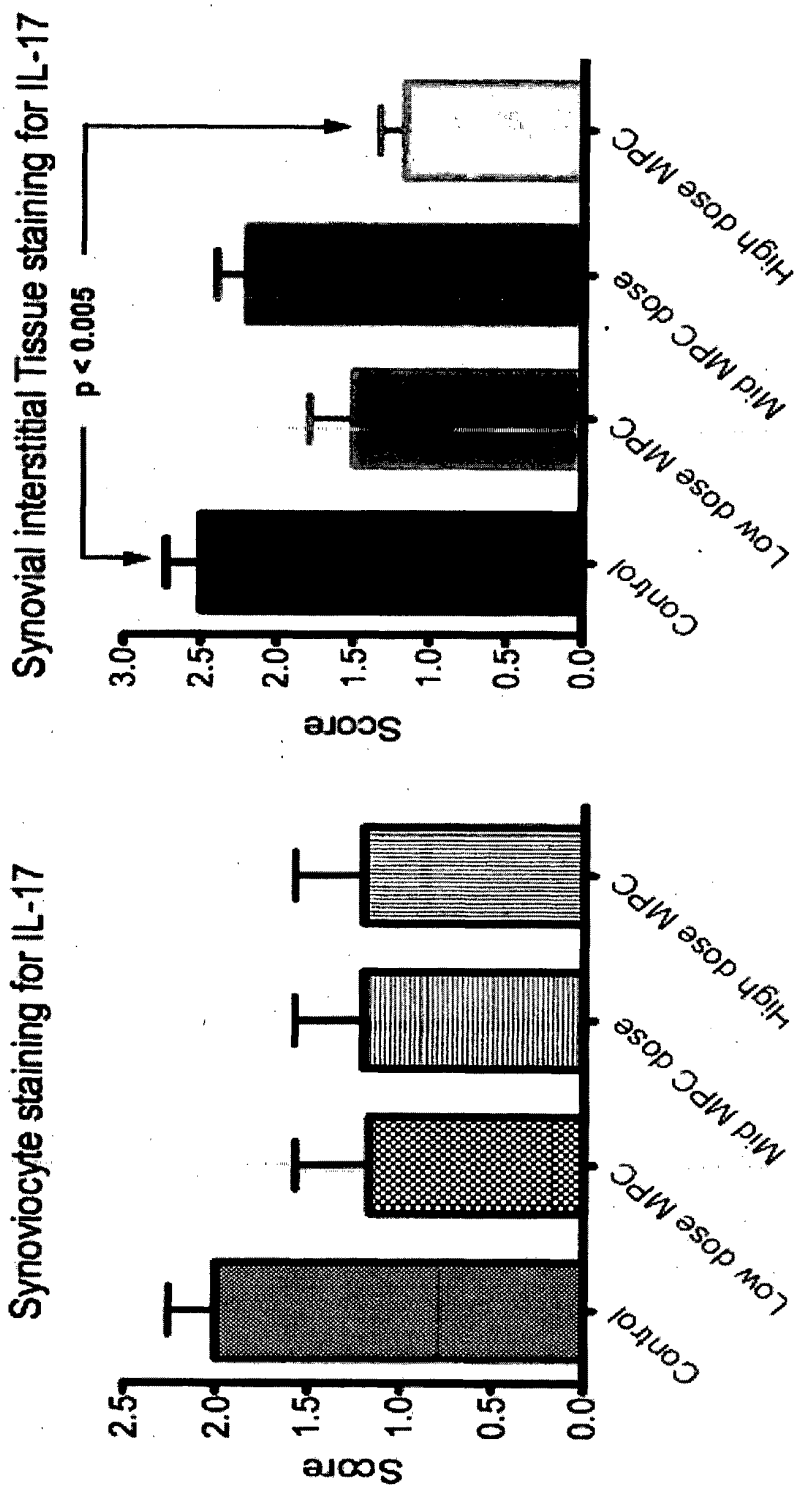
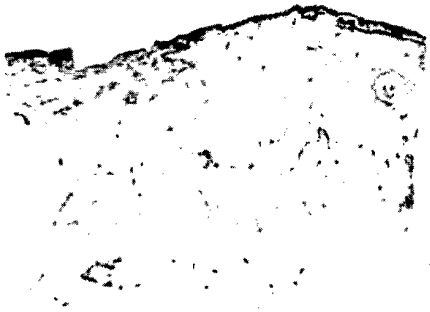

Synovial interstitial Tissue staining for IL-17
p < 0.005
Score
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Control
Low dose MPC
Mid MPC dose
High dose MPC
Synoviocyte staining for IL-17
Score
2.5
2.0
1.5
1.0
0.5
0.0
Control
Low dose MPC
Mid MPC dose
High dose MPC

Figure 10F

CD14 cells

Untreated control left synovium



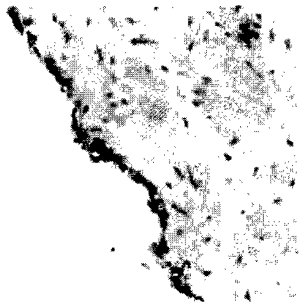
B1853 score: intima 3, tissue 4

Low dose MPC Group left synovium



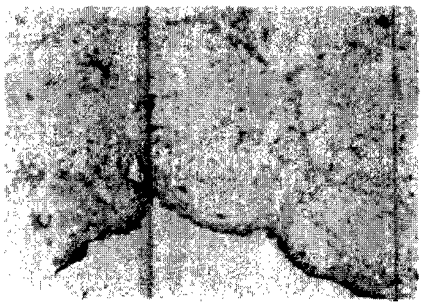
B2526 score: intima 2, tissue 1

Mid dose MPC Group left synovium



W4094 score: intima 3, tissue 2

High dose MPC Group left synovium



B2149 score: intima 2, tissue 1

Figure 11A

TNF-α

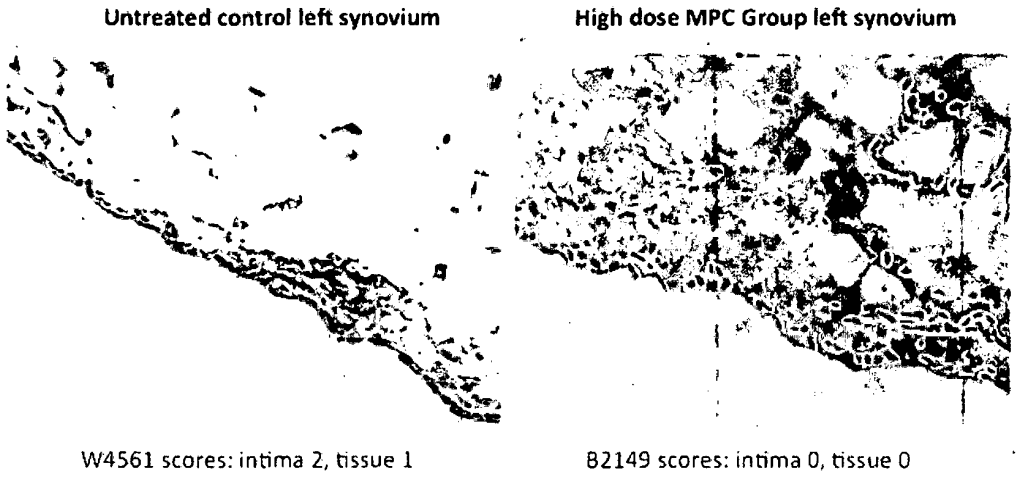


Figure 11B

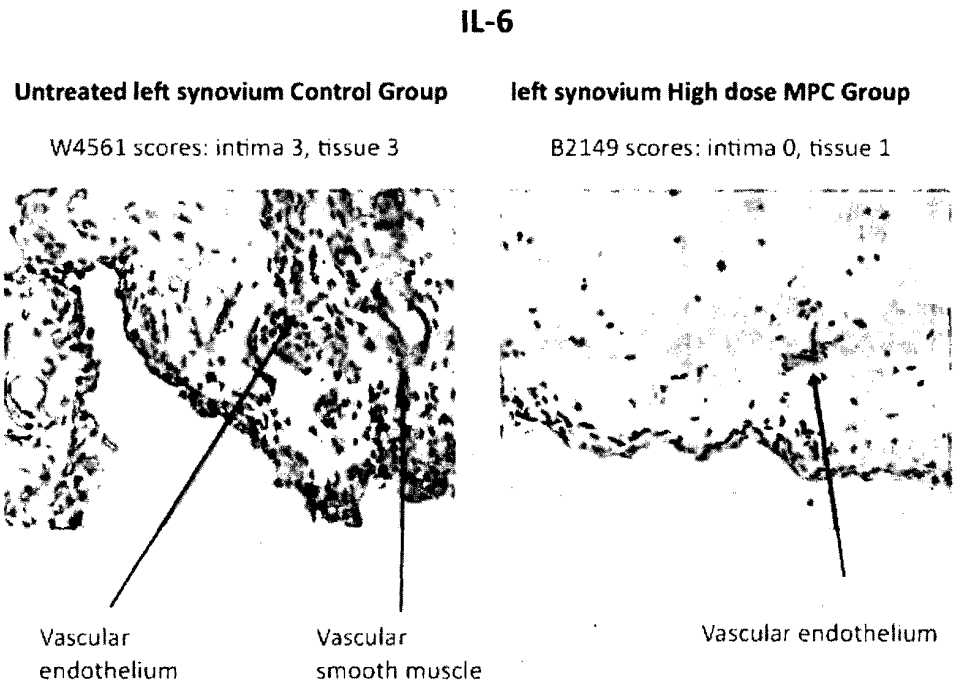
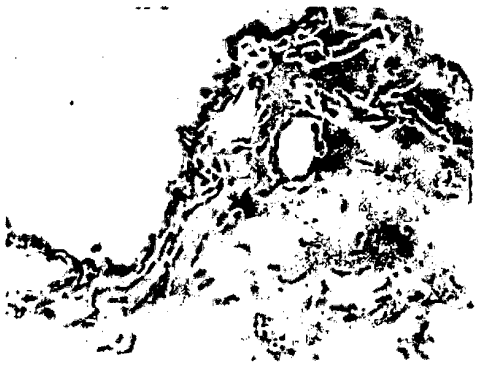

IL-6
Untreated left synovium Control Group
W4561 scores: intima 3, tissue 3
left synovium High dose MPC Group
B2149 scores: intima 0, tissue 1
Vascular endothelium
Vascular smooth muscle
Vascular endothelium

Figure 11C

IL-17

Untreated left synovium Control Group

W1747 scores: intima 3, tissue 2



left synovium High dose MPC Group

B2149 scores: intima 1, tissue 1



Figure 11D

IL-10

Untreated left synovium Control Group

W2833 scores: Intima 0, tissue 0



left synovium High dose MPC Group

B2230 scores: Intima 1, tissue 0

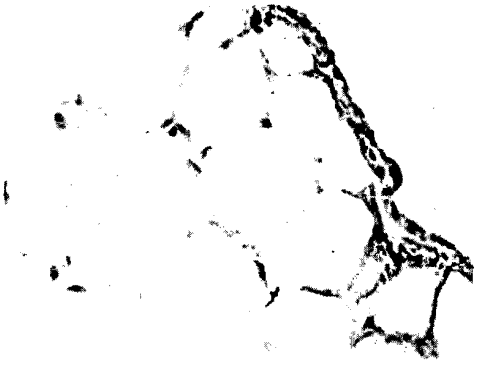


Figure 11E