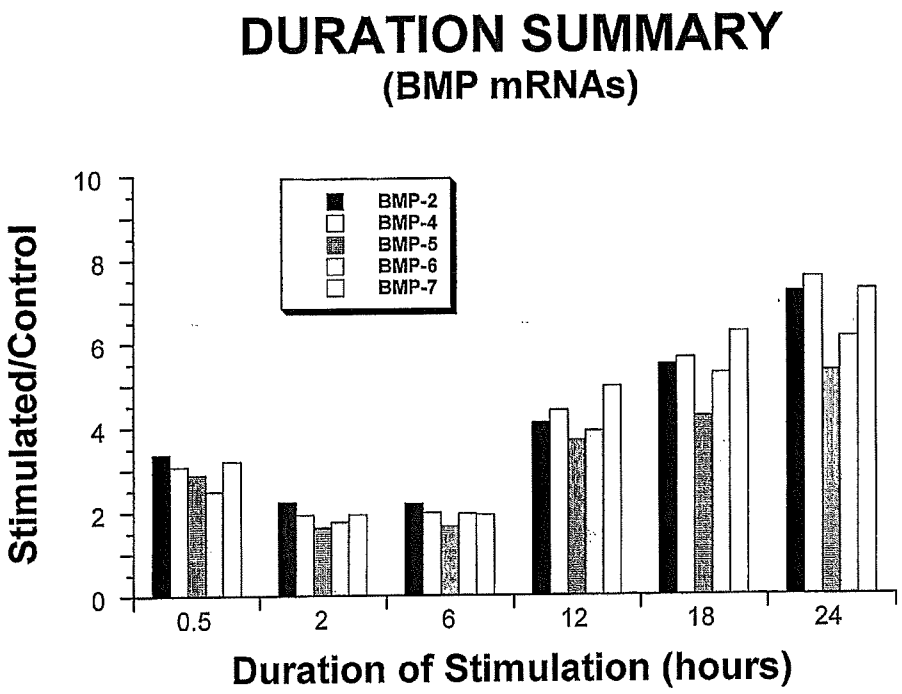

DURATION SUMMARY
(BMP mRNAs)
Stimulated/Control
10
8
6
4
2
0
BMP-2
BMP-4
BMP-5
BMP-6
BMP-7
0.5
2
6
12
18
24
Duration of Stimulation (hours)

Figure 1

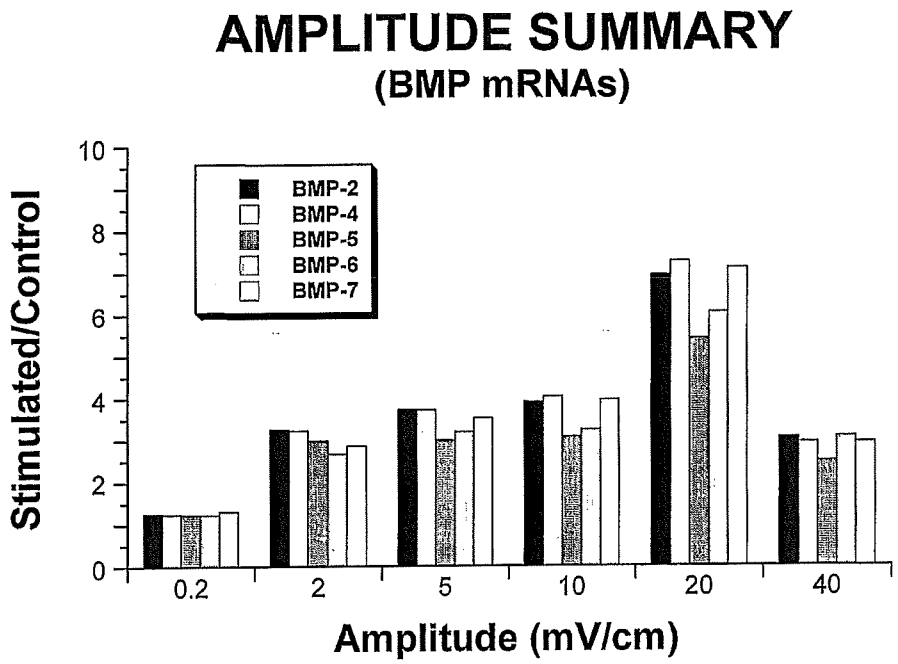

AMPLITUDE SUMMARY
(BMP mRNAs)
Stimulated/Control
10
8
6
4
2
0
BMP-2
BMP-4
BMP-5
BMP-6
BMP-7
0.2
2
5
10
20
40
Amplitude (mV/cm)

Figure 2

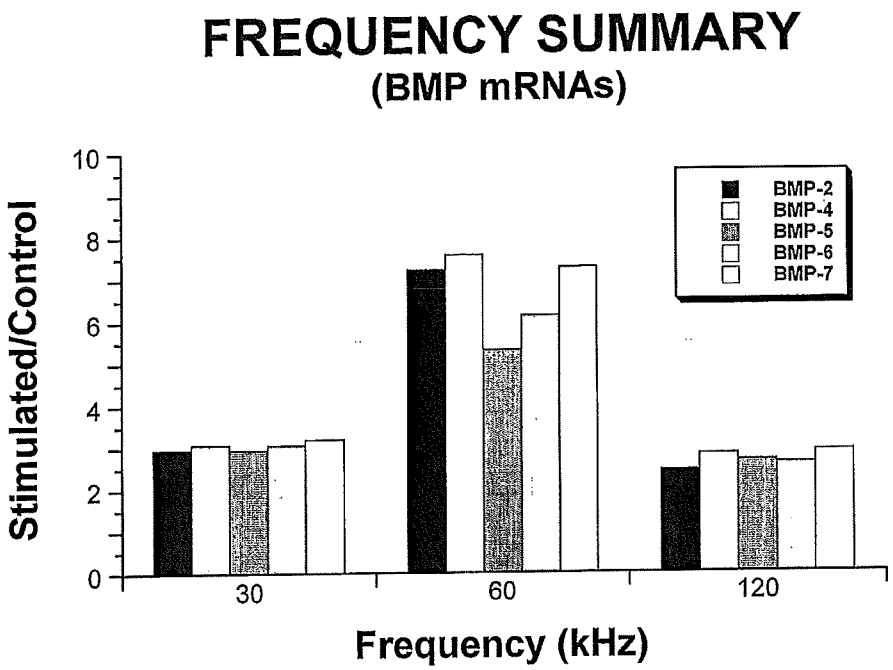

FREQUENCY SUMMARY
(BMP mRNAs)
Stimulated/Control
10
8
6
4
2
0
30
60
120
Frequency (kHz)
BMP-2
BMP-4
BMP-5
BMP-6
BMP-7

Figure 3

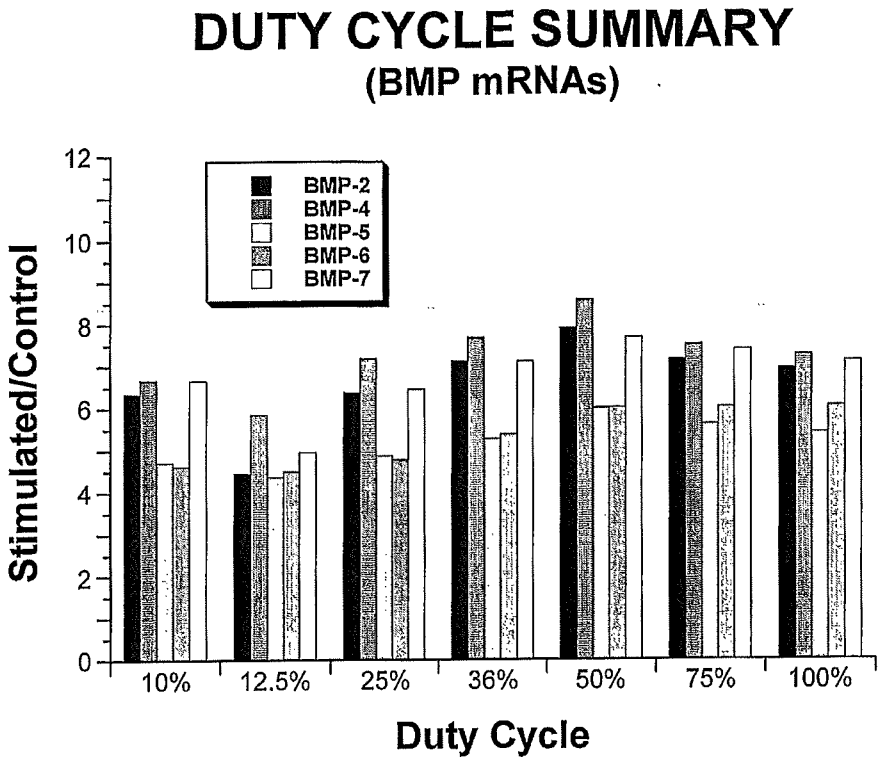

DUTY CYCLE SUMMARY
(BMP mRNAs)
Stimulated/Control
0
2
4
6
8
10
12
BMP-2
BMP-4
BMP-5
BMP-6
BMP-7
10%
12.5%
25%
36%
50%
75%
100%
Duty Cycle

Figure 4

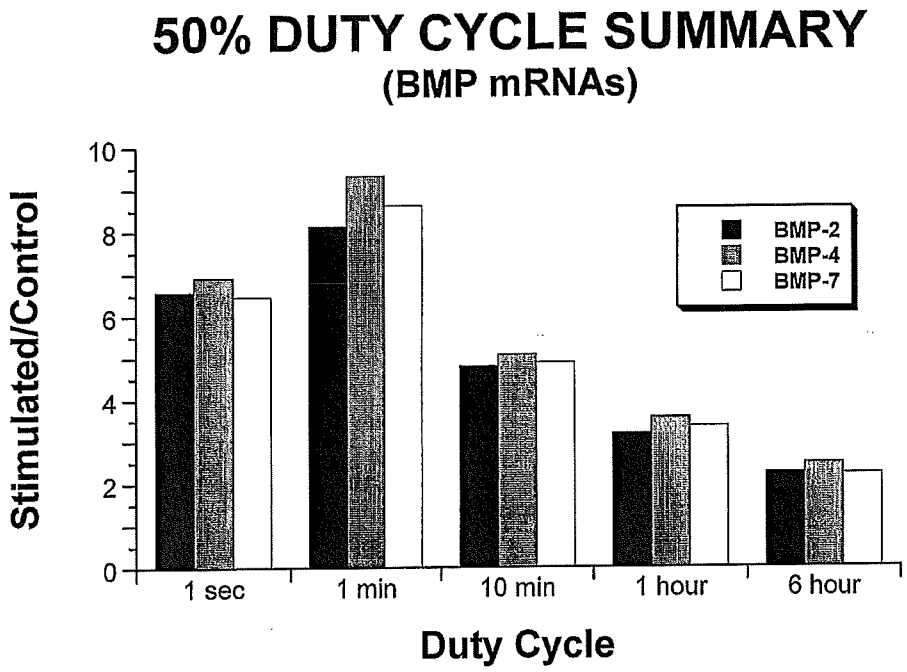

50% DUTY CYCLE SUMMARY
(BMP mRNAs)
Stimulated/Control
10
8
6
4
2
0
BMP-2
BMP-4
BMP-7
1 sec
1 min
10 min
1 hour
6 hour
Duty Cycle

Figure 5

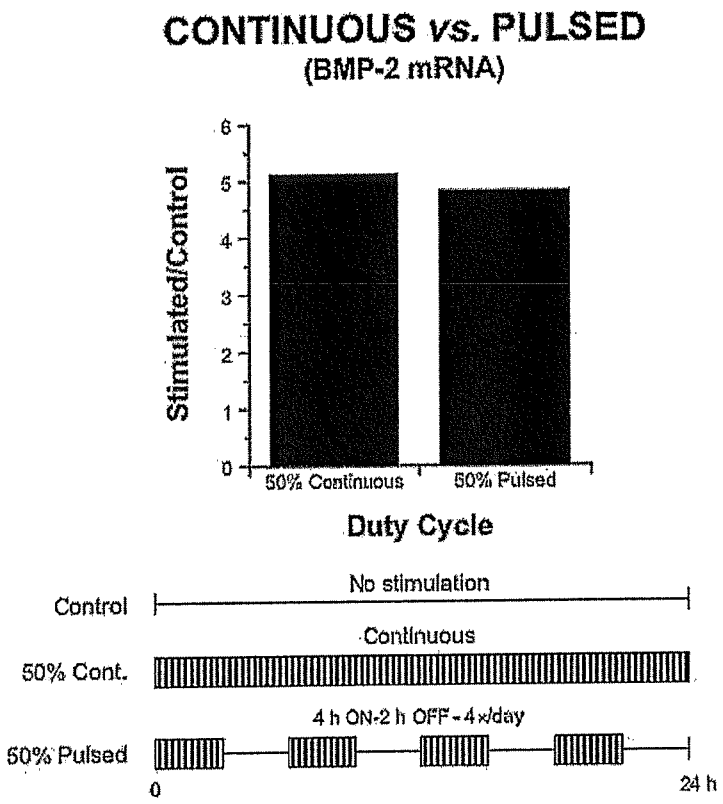

CONTINUOUS vs. PULSED
(BMP-2 mRNA)
Stimulated/Control
0
1
2
3
4
5
6
50% Continuous
50% Pulsed
Duty Cycle
Control
No stimulation
50% Cont.
Continuous
50% Pulsed
4 h ON-2 h OFF - 4 x/day
0
24 h

Figure 6

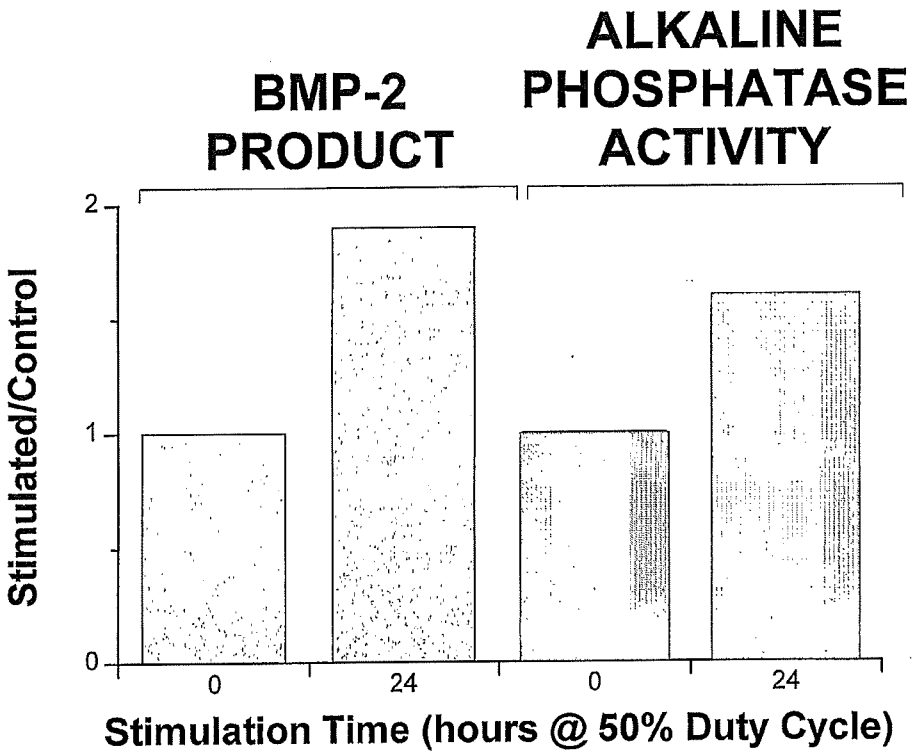

BMP-2
PRODUCT
ALKALINE
PHOSPHATASE
ACTIVITY
Stimulated/Control
2
1
0
0
24
0
24
Stimulation Time (hours @ 50% Duty Cycle)

Figure 7

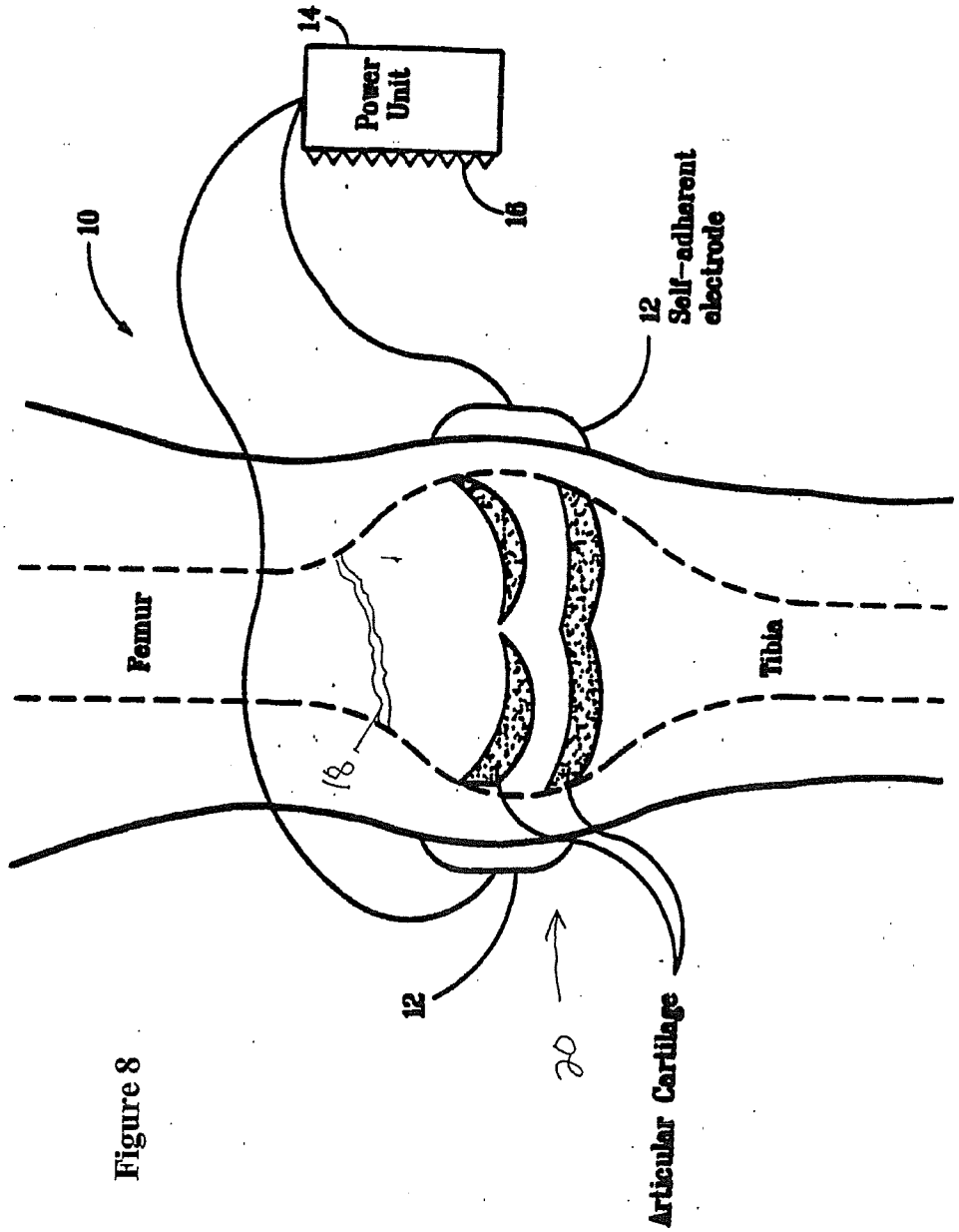

14
Power Unit
16
10
12
Self-adherent electrode
Femur
Tibia
18
12
20
Articular Cartilage

Figure 8