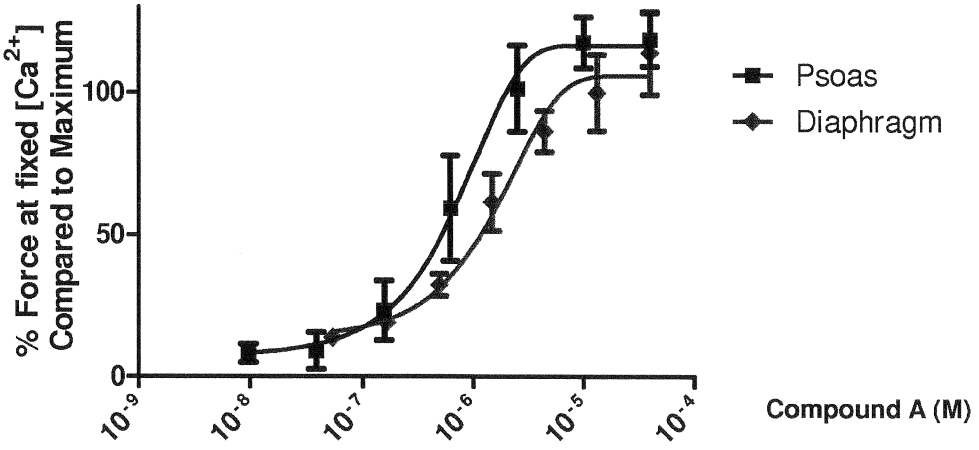

% Force at fixed [Ca2+]
Compared to Maximum
100
50
0
10-9
10-8
10-7
10-6
10-5
10-4
Compound A (M)
Psoas
Diaphragm

FIG. 1

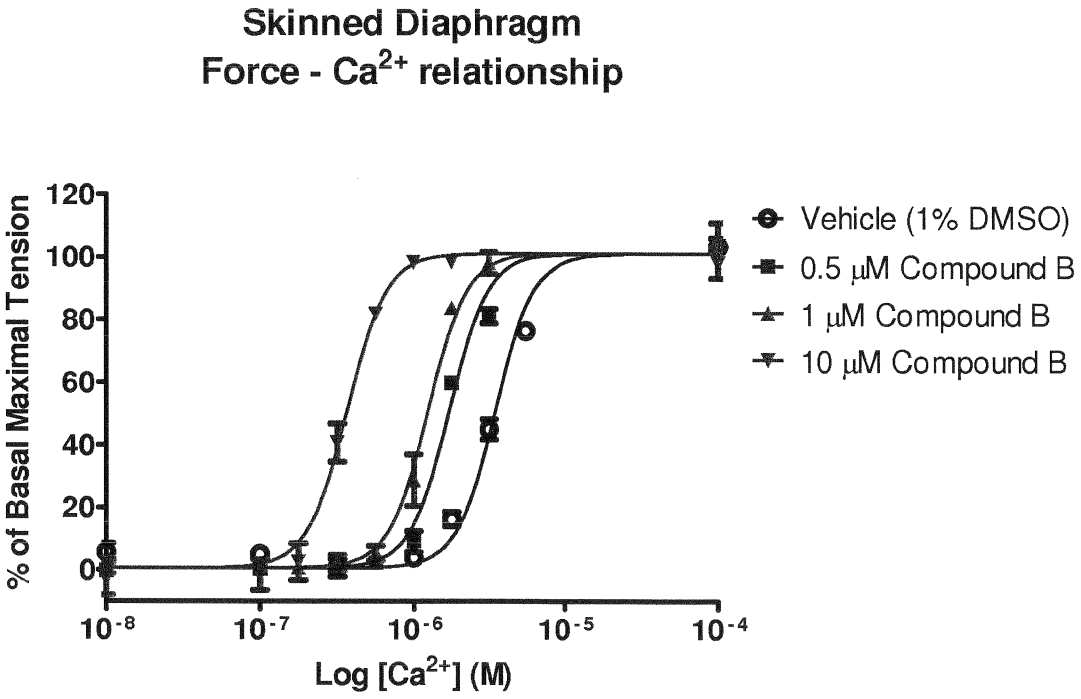

Skinned Diaphragm
Force - Ca2+ relationship
% of Basal Maximal Tension
120
100
80
60
40
20
0
10-8
10-7
10-6
10-5
10-4
Log [Ca2+] (M)
Vehicle (1% DMSO)
0.5 μM Compound B
1 μM Compound B
10 μM Compound B

FIG. 2

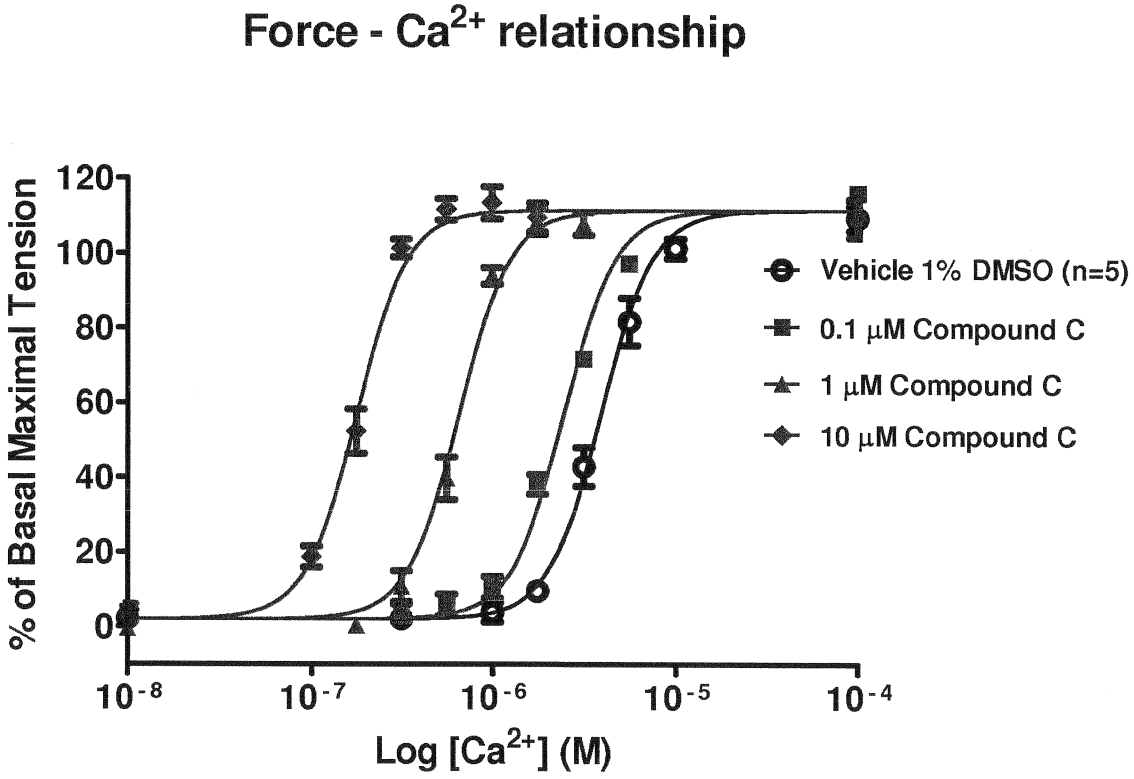

Force - Ca2+ relationship
% of Basal Maximal Tension
120
100
80
60
40
20
0
10-8
10-7
10-6
10-5
10-4
Log [Ca2+] (M)
Vehicle 1% DMSO (n=5)
0.1 μM Compound C
1 μM Compound C
10 μM Compound C

FIG. 3

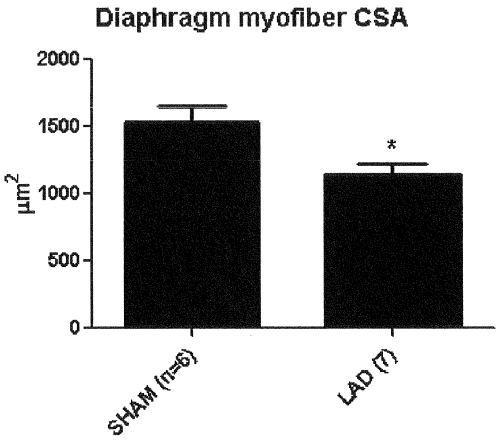


FIG. 4A

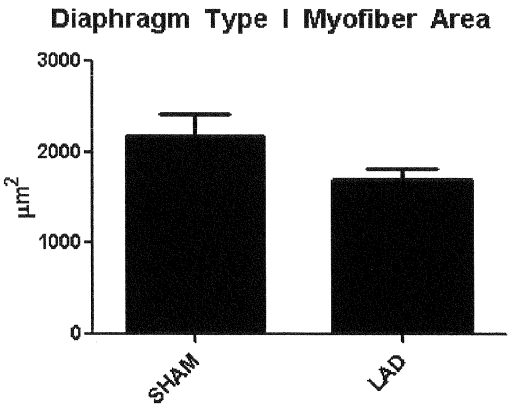


FIG. 4B

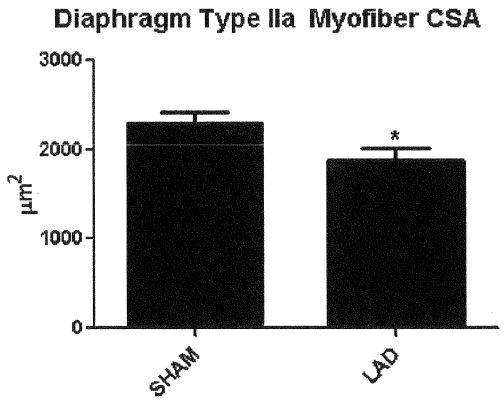


FIG. 4C

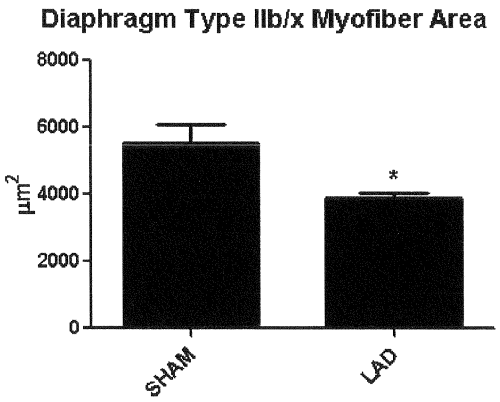


FIG. 4D

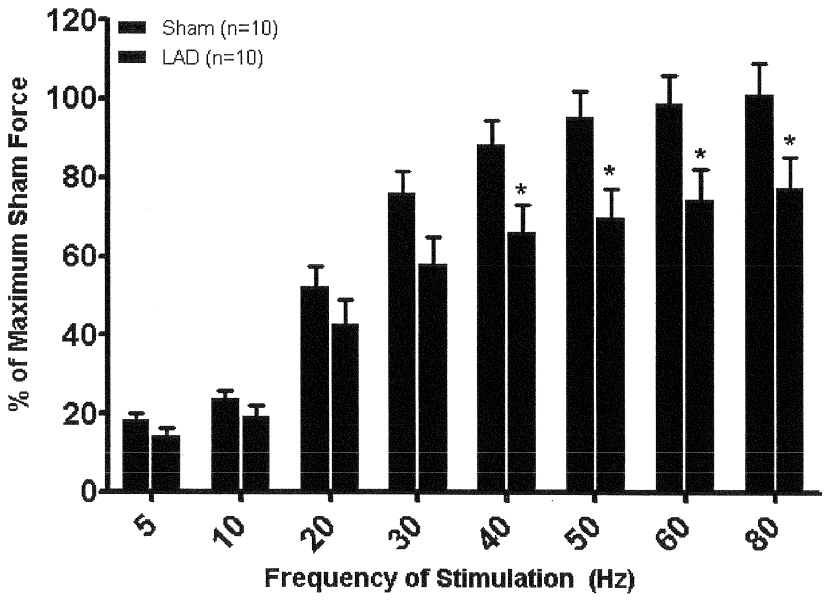

Sham (n=10)
LAD (n=10)
% of Maximum Sham Force
120
100
80
60
40
20
0
*
*
*
*
5
10
20
30
40
50
60
80
Frequency of Stimulation (Hz)

FIG. 5

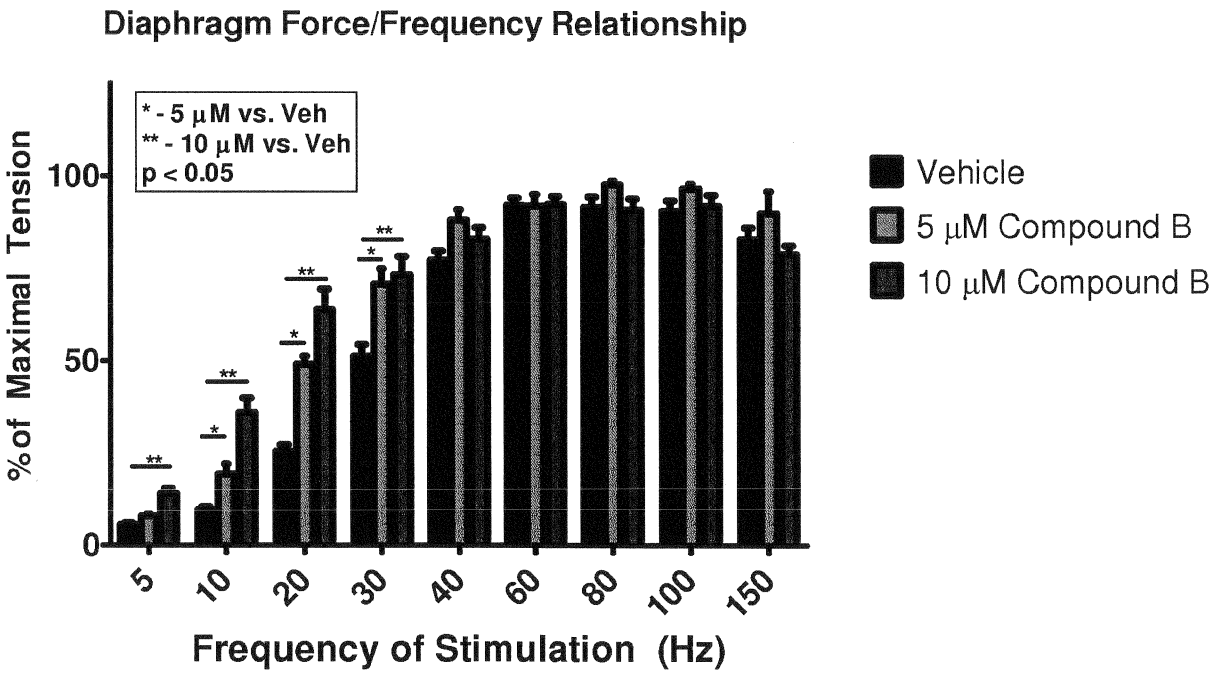

Diaphragm Force/Frequency Relationship
* - 5 μM vs. Veh
** - 10 μM vs. Veh
p < 0.05
% of Maximal Tension
100
50
0
5
10
20
30
40
60
80
100
150
Frequency of Stimulation (Hz)
Vehicle
5 μM Compound B
10 μM Compound B

FIG. 6

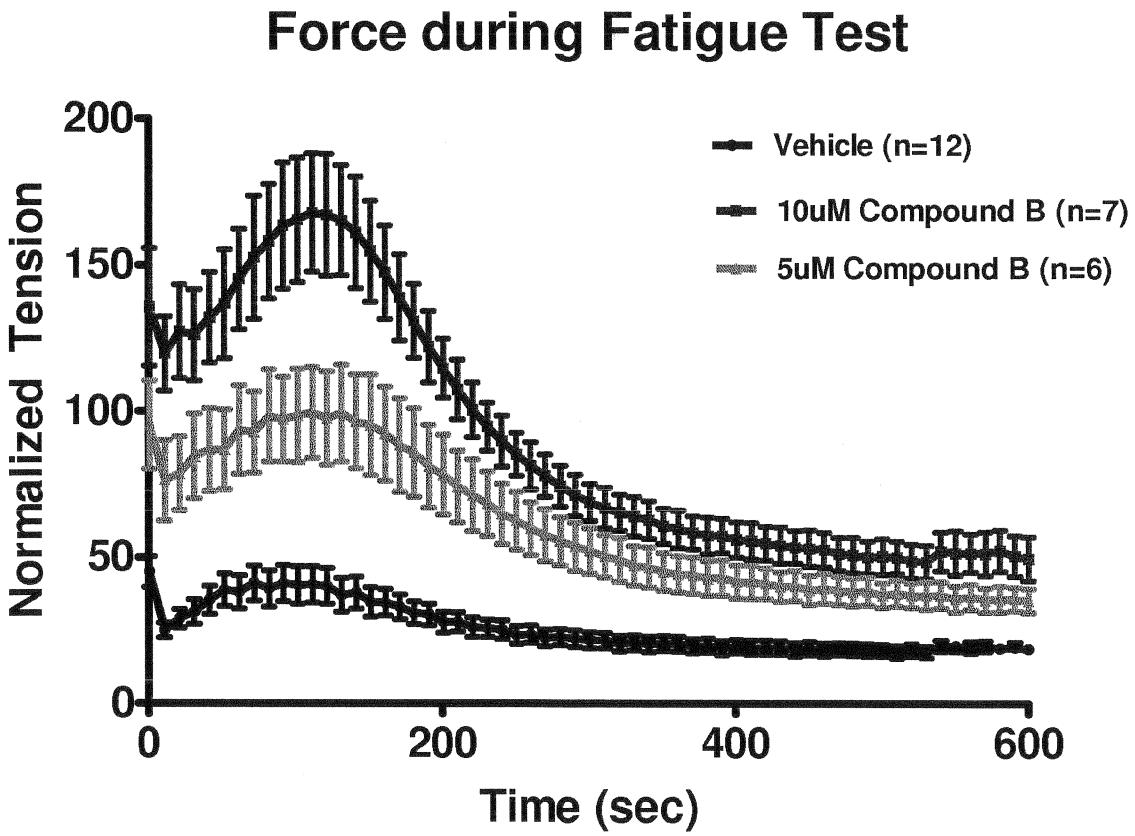

Force during Fatigue Test
Normalized Tension
200
150
100
50
0
0
200
400
600
Time (sec)
Vehicle (n=12)
10uM Compound B (n=7)
5uM Compound B (n=6)

FIG. 7

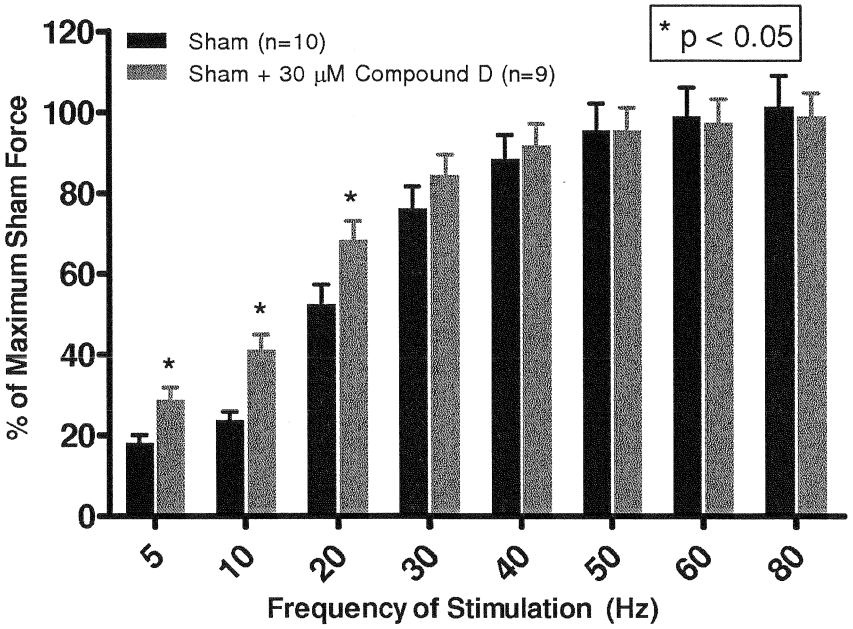

Sham (n=10)
Sham + 30 μM Compound D (n=9)
* p < 0.05
% of Maximum Sham Force
120
100
80
60
40
20
0
5
10
20
30
40
50
60
80
Frequency of Stimulation (Hz)

FIG. 8A

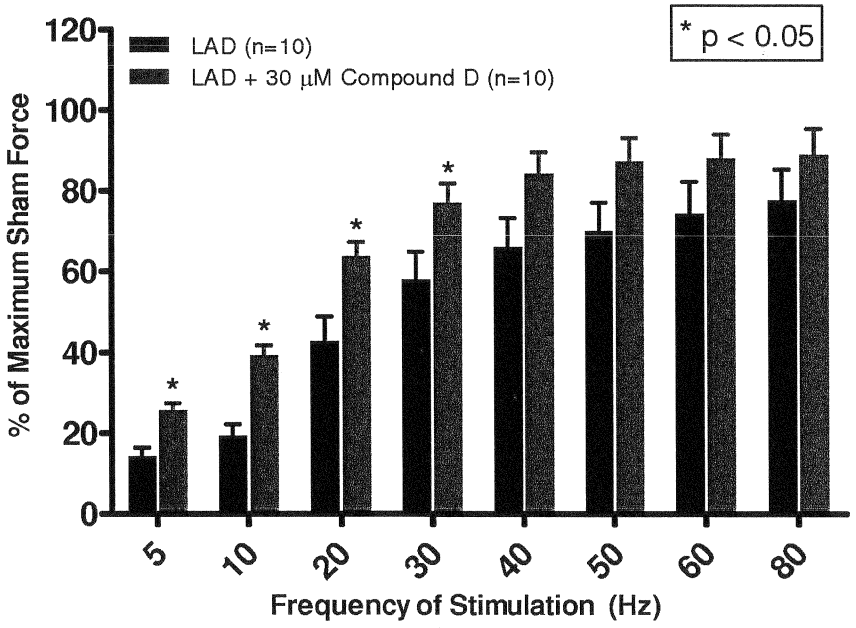

LAD (n=10)
LAD + 30 μM Compound D (n=10)
* p < 0.05
% of Maximum Sham Force
120
100
80
60
40
20
0
5
10
20
30
40
50
60
80
Frequency of Stimulation (Hz)

FIG. 8B

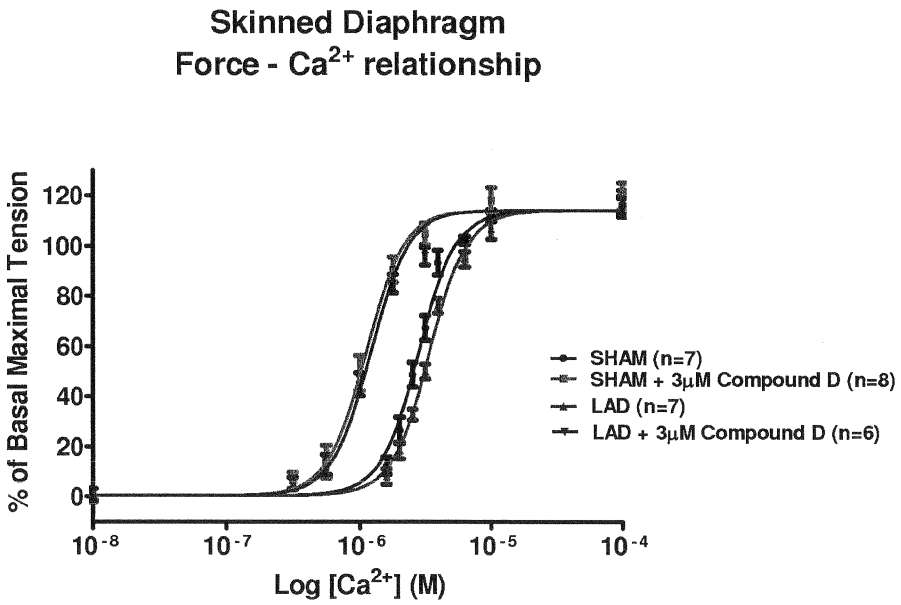

Skinned Diaphragm
Force - Ca2+ relationship
% of Basal Maximal Tension
120
100
80
60
40
20
0
10-8
10-7
10-6
10-5
10-4
Log [Ca2+] (M)
SHAM (n=7)
SHAM + 3μM Compound D (n=8)
LAD (n=7)
LAD + 3μM Compound D (n=6)

FIG. 9

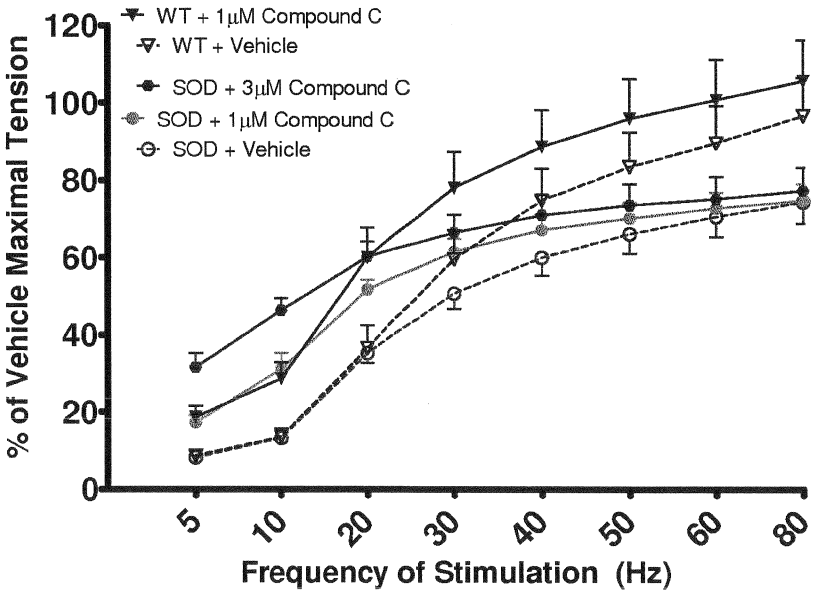

WT + 1μM Compound C
WT + Vehicle
SOD + 3μM Compound C
SOD + 1μM Compound C
SOD + Vehicle
% of Vehicle Maximal Tension
120
100
80
60
40
20
0
5
10
20
30
40
50
60
80
Frequency of Stimulation (Hz)

FIG. 10

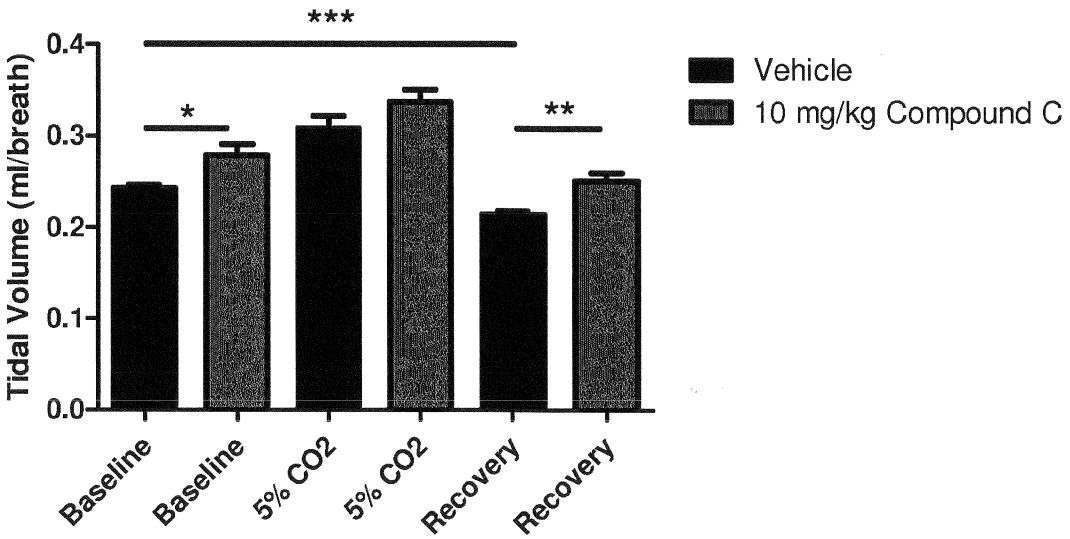

***
*
**
0.4
0.3
0.2
0.1
0.0
Tidal Volume (ml/breath)
Baseline
Baseline
5% CO2
5% CO2
Recovery
Recovery
Vehicle
10 mg/kg Compound C

FIG. 11