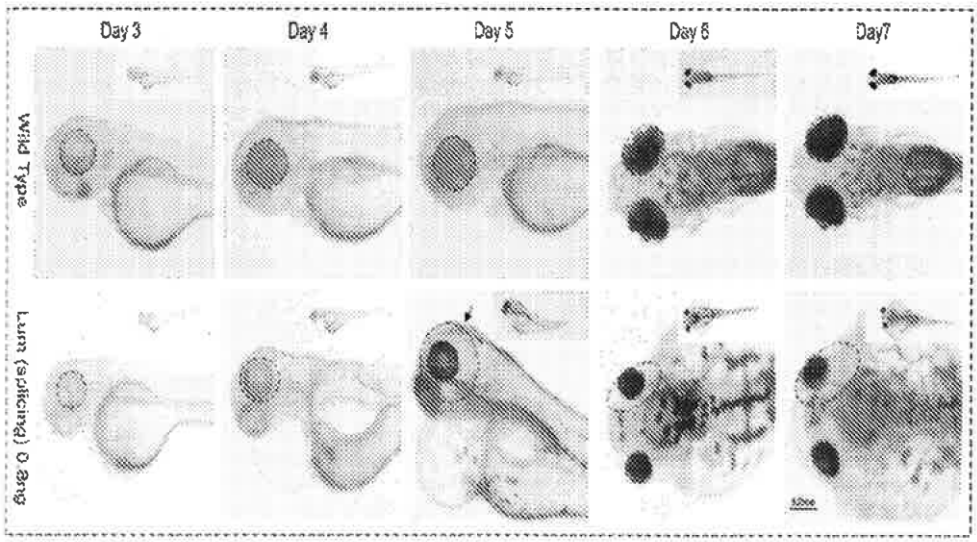


Figure 1

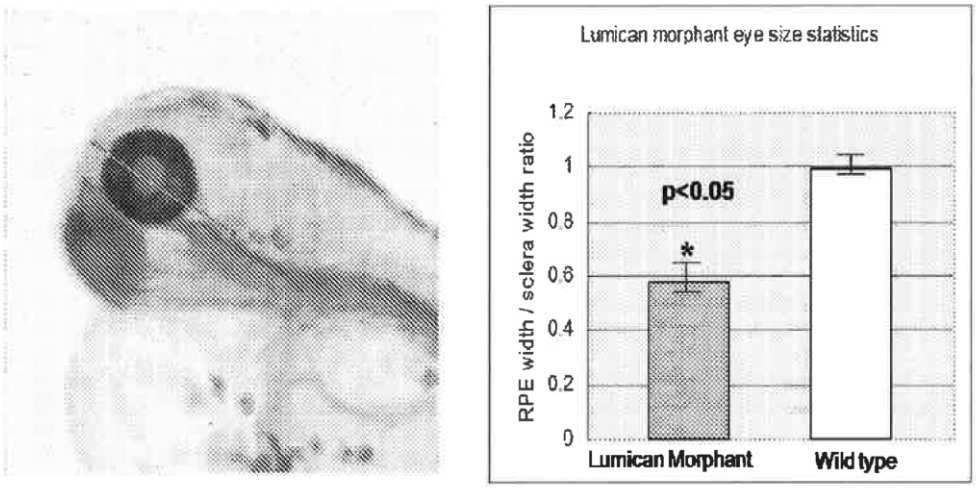

Lumican morphant eye size statistics
RPE width / sclera width ratio
1.2
1
0.8
0.6
0.4
0.2
0
p<0.05
*
Lumican Morphant
Wild type

Figure 2

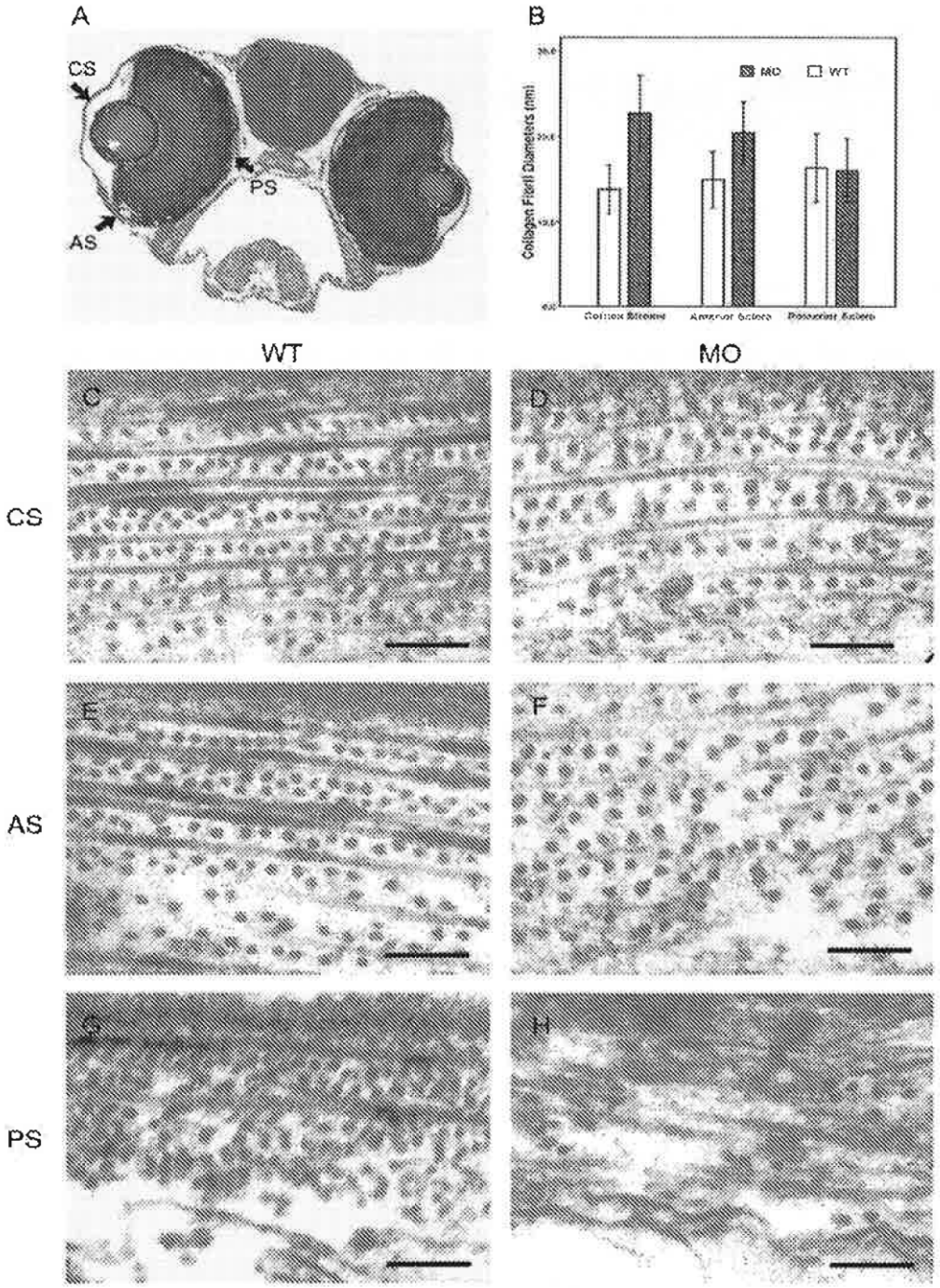

A
CS
PS
AS
B
MO
WT
Collagen Fibril Diameters (nm)
WT
MO
C
D
E
F
G
H
CS
AS
PS

Figure 3 (3/13)

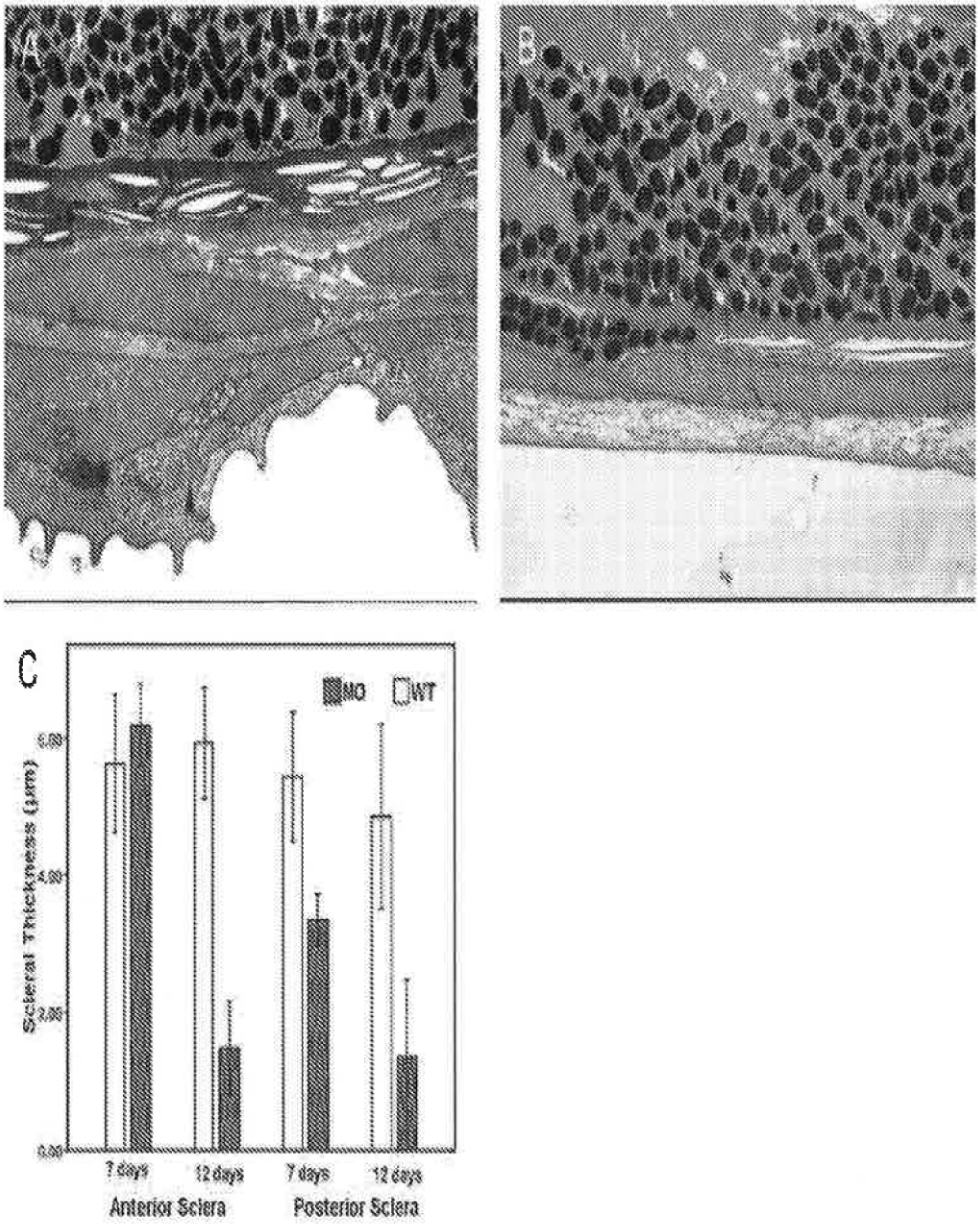

A
B
C
MO
WT
Scleral Thickness (μm)
7 days
12 days
7 days
12 days
Anterior Sclera
Posterior Sclera

Figure 4

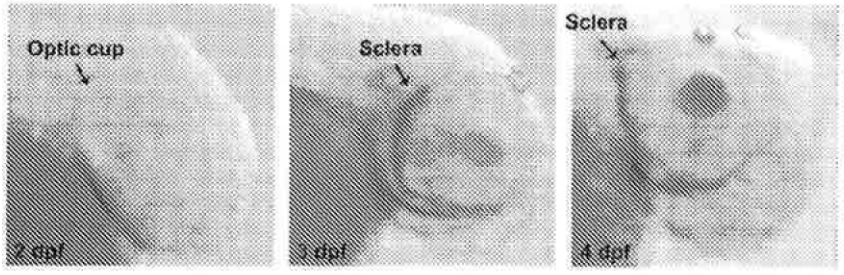


Figure 5

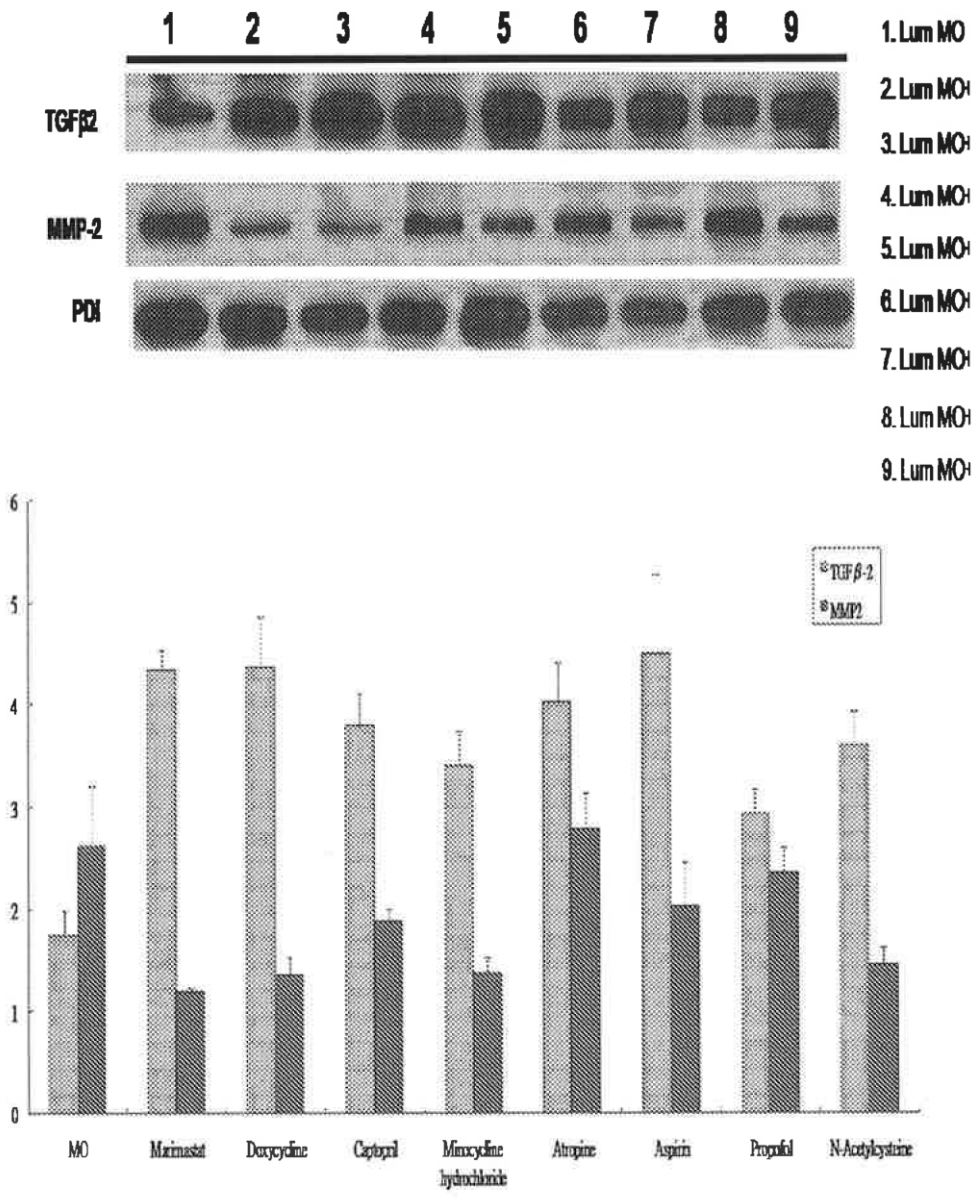

1 2 3 4 5 6 7 8 9
TGFβ2
MMP-2
PDI
1. Lum MO
2. Lum MO
3. Lum MO
4. Lum MO
5. Lum MO
6. Lum MO
7. Lum MO
8. Lum MO
9. Lum MO
TGFβ-2
MMP2
0
1
2
3
4
5
6
MO
Marimastat
Doxycycline
Captopril
Minocycline hydrochloride
Atropine
Aspirin
Propofol
N-Acetylcysteine

Figure 6

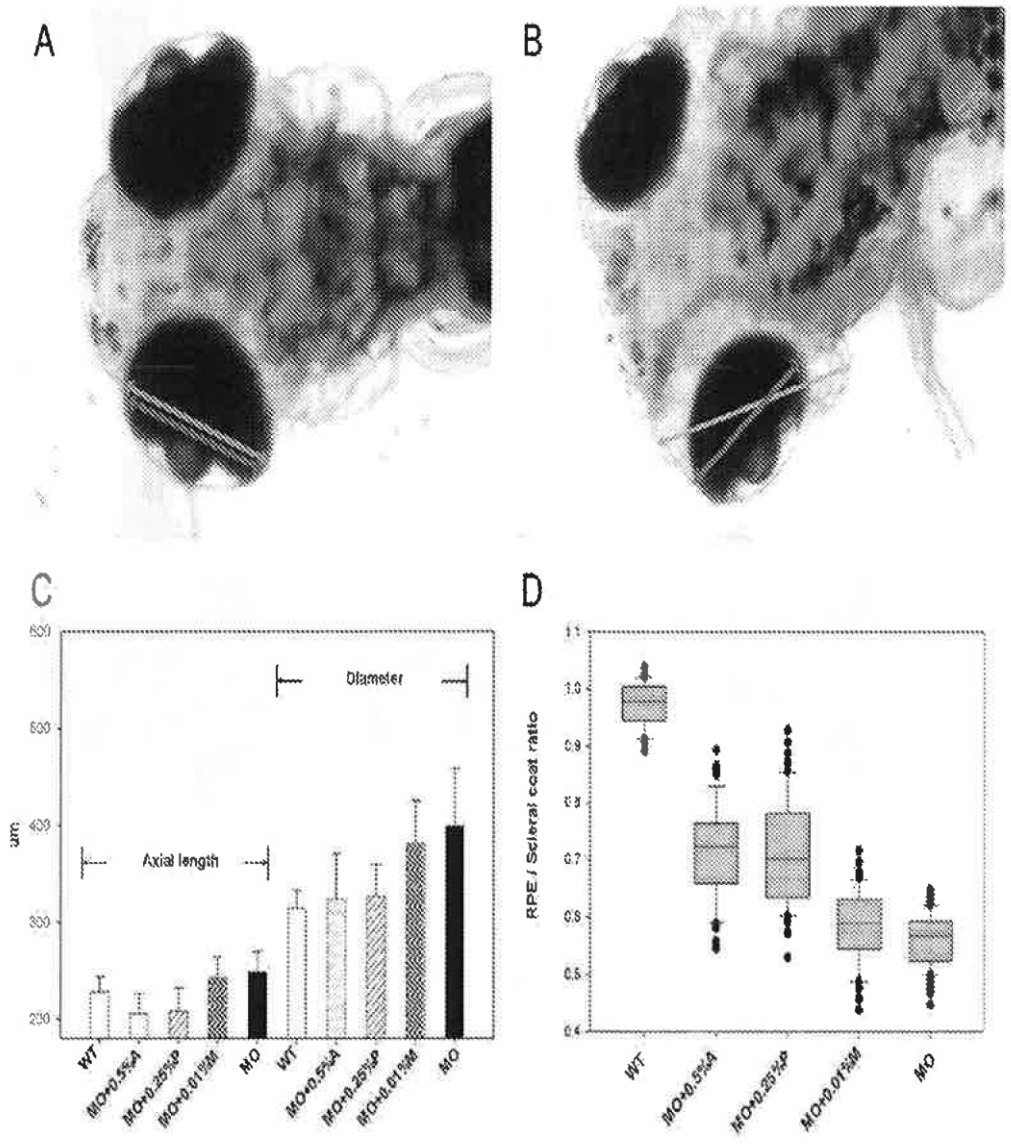

A
B
C
D
Diameter
Axial length
μm
WT
MO+0.5%A
MO+0.25%P
MO+0.01%M
MO
RPE / Scleral coat ratio

Figure 7

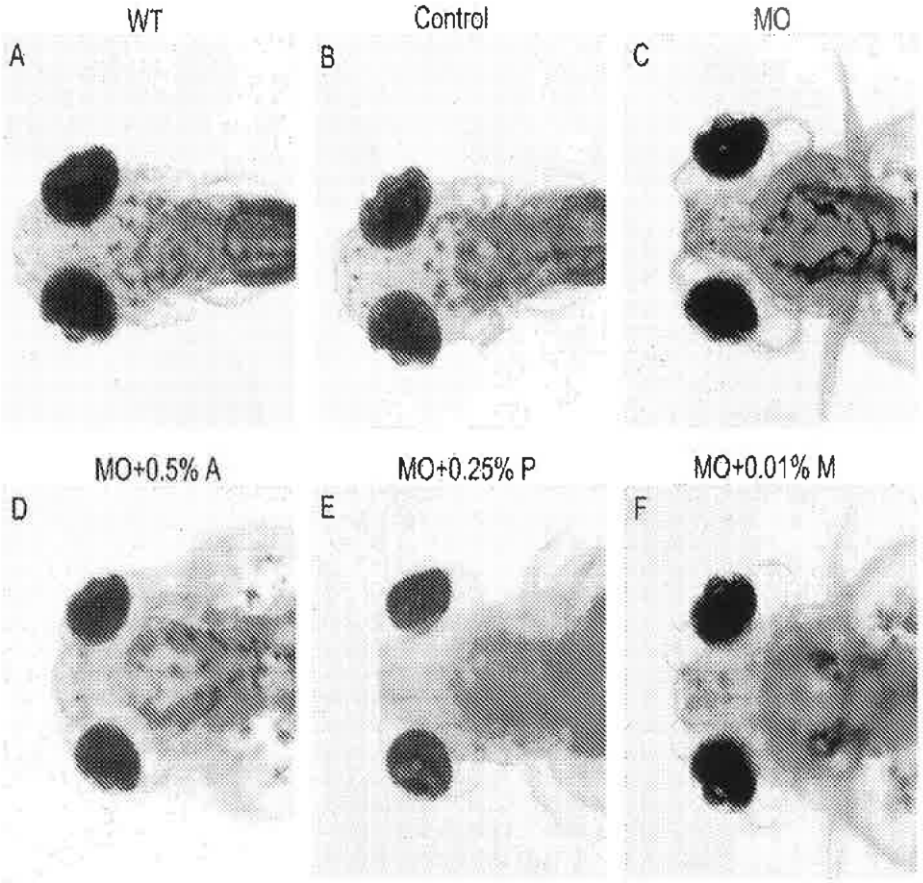


Figure 8

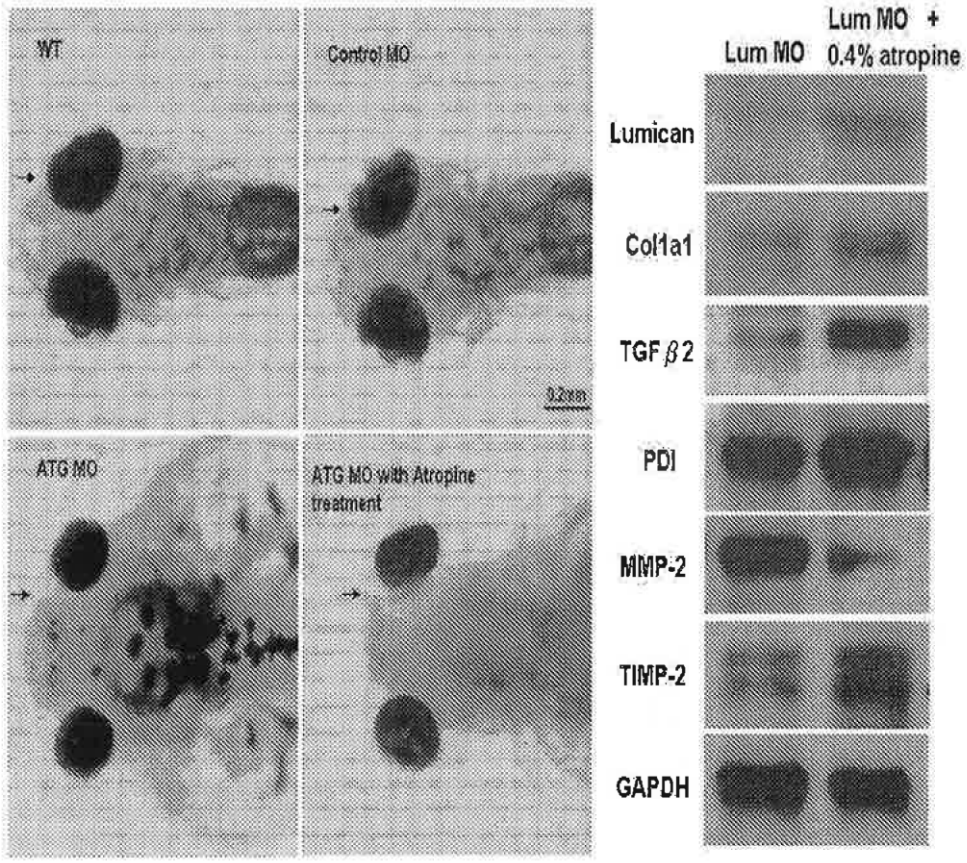

WT
Control MO
0.2mm
ATG MO
ATG MO with Atropine treatment
Lum MO
Lum MO + 0.4% atropine
Lumican
Col1a1
TGF β2
PDI
MMP-2
TIMP-2
GAPDH

Figure 9

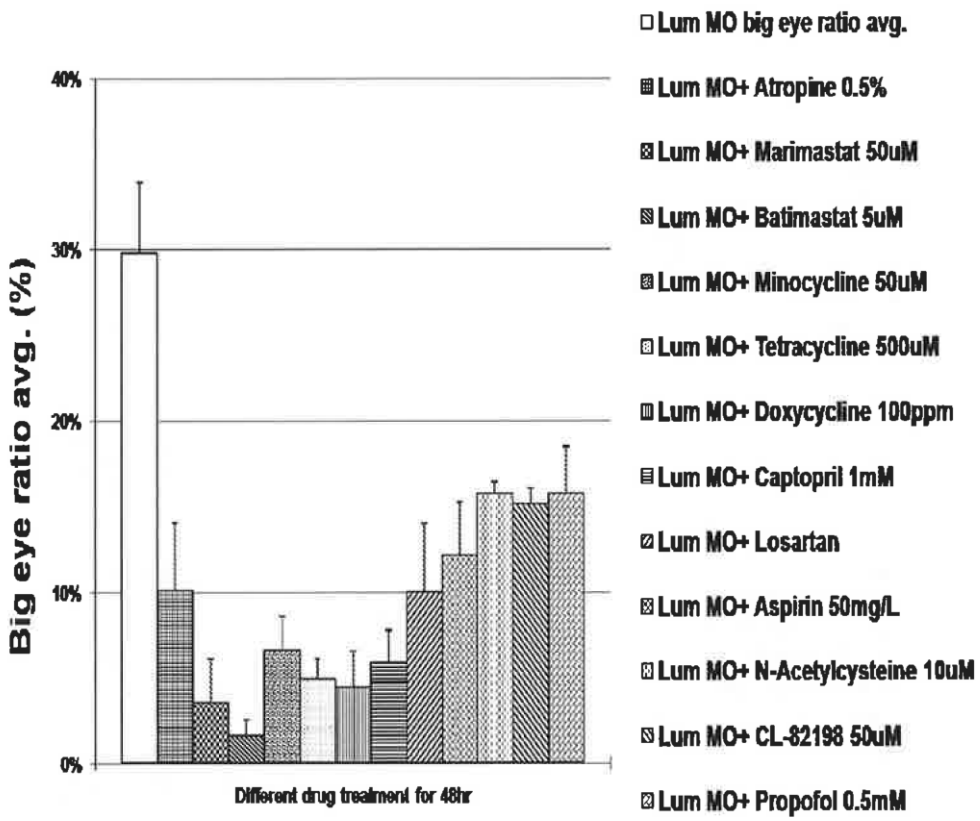

Big eye ratio avg. (%)
40%
30%
20%
10%
0%
Different drug treatment for 48hr
Lum MO big eye ratio avg.
Lum MO+ Atropine 0.5%
Lum MO+ Marimastat 50uM
Lum MO+ Batimastat 5uM
Lum MO+ Minocycline 50uM
Lum MO+ Tetracycline 500uM
Lum MO+ Doxycycline 100ppm
Lum MO+ Captopril 1mM
Lum MO+ Losartan
Lum MO+ Aspirin 50mg/L
Lum MO+ N-Acetylcysteine 10uM
Lum MO+ CL-82198 50uM
Lum MO+ Propofol 0.5mM

Figure 10

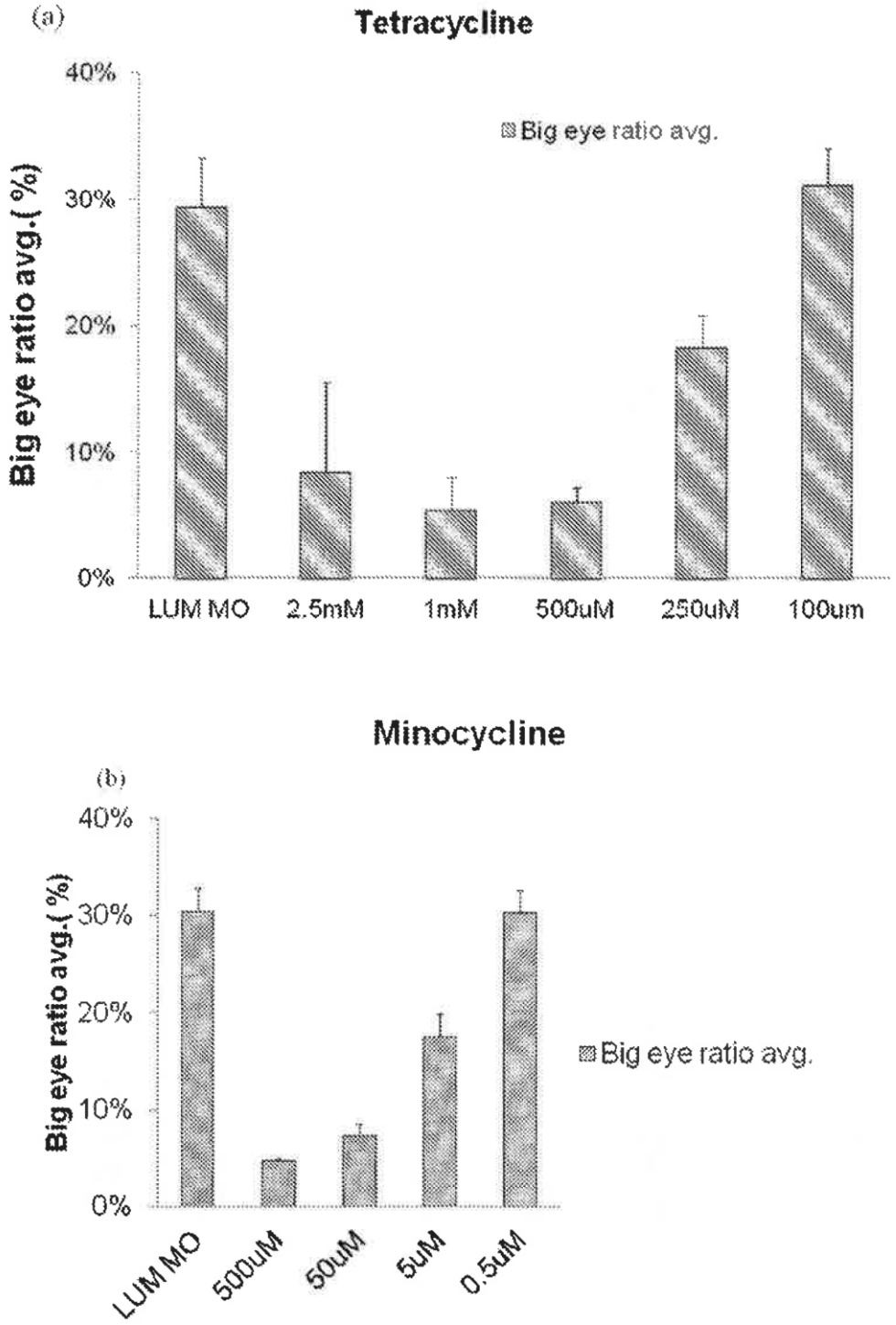
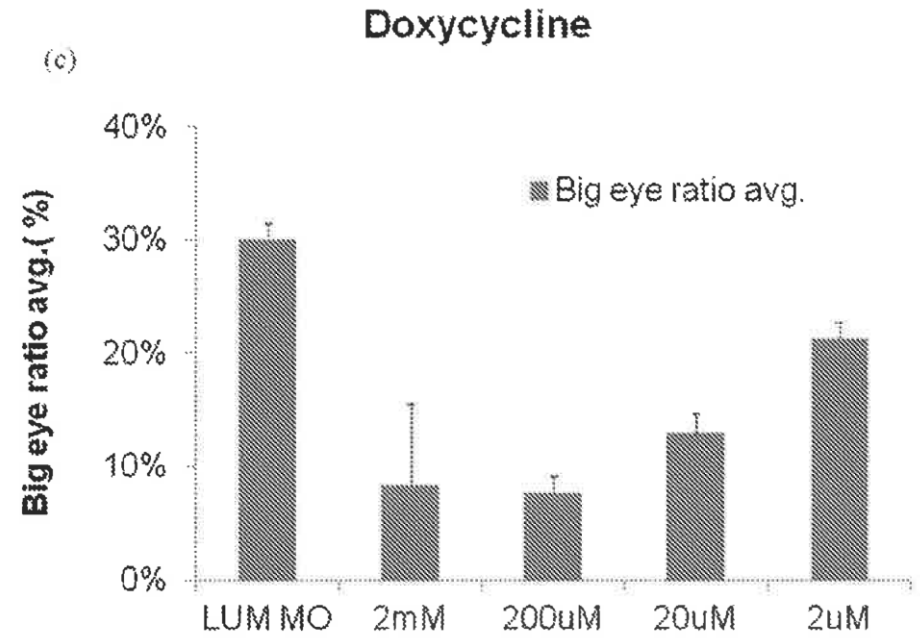


Figure 11 (11/13)



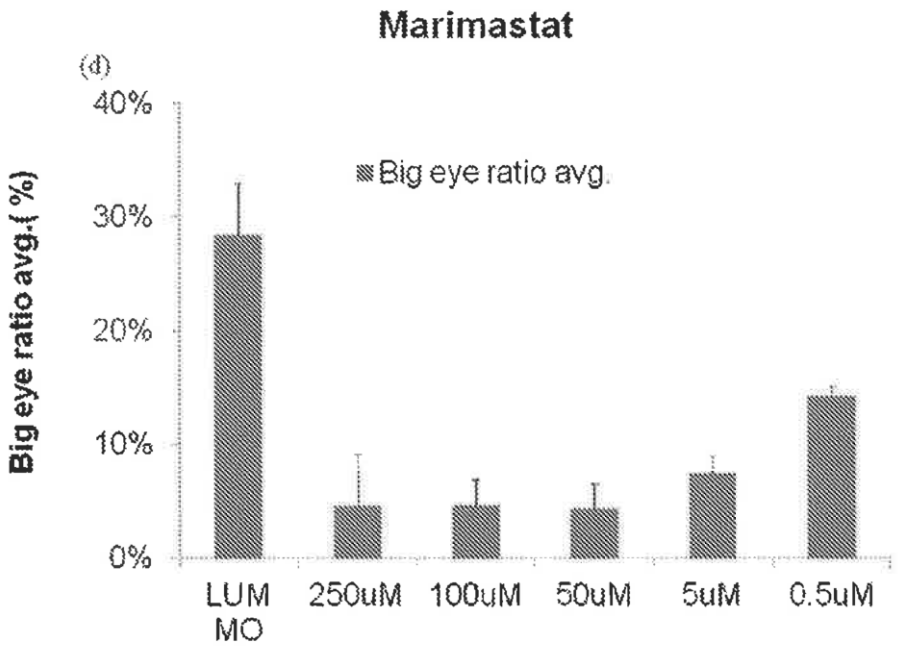


Figure 11 (Continued) (12/13)

(e)

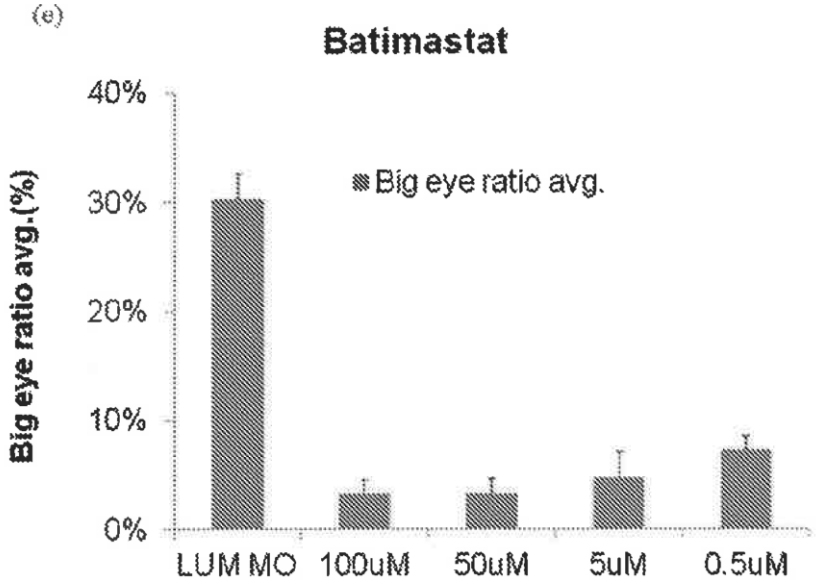


Figure 11 (Continued)