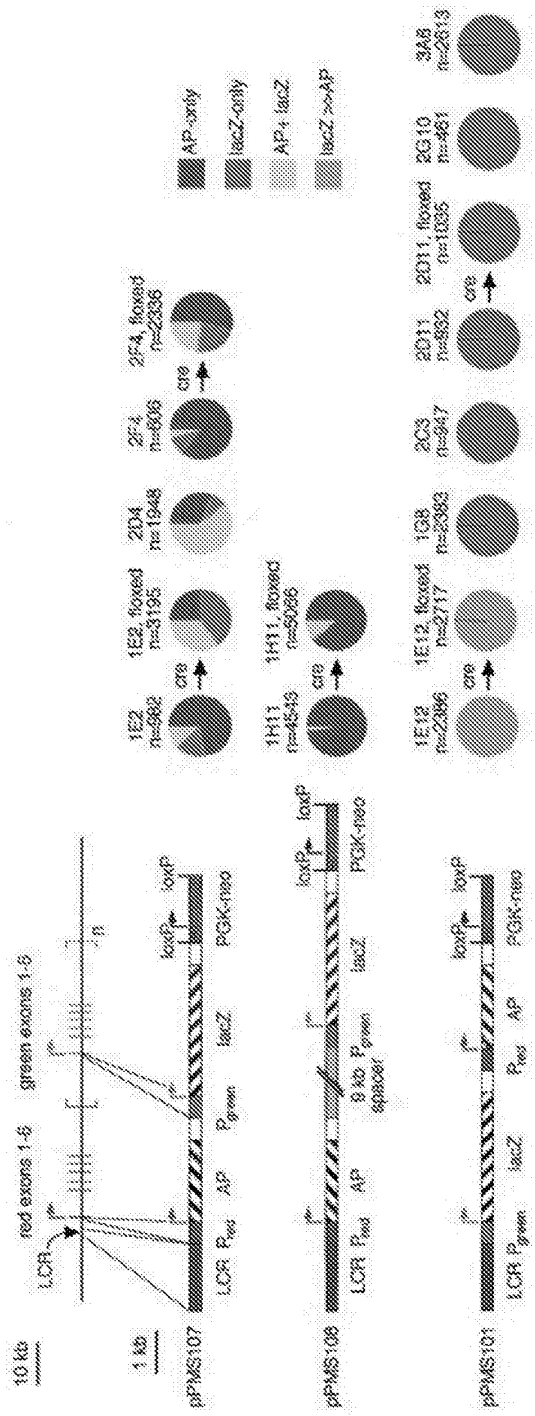

10 kb
1 kb
LCR
red exons 1-6
green exons 1-6
loxP
PGK-neo
lacZ
AP
pPMS107
pPMS108
pPMS101
1E2
1E2, floxed
2D4
2F4
2F4, floxed
1H11
1H11, floxed
1E12
1E12, floxed
1G8
2C3
2D11
2D11, floxed
2G10
3A8
cre
AP only
lacZ only
AP+ lacZ
lacZ >>AP

Figure 1

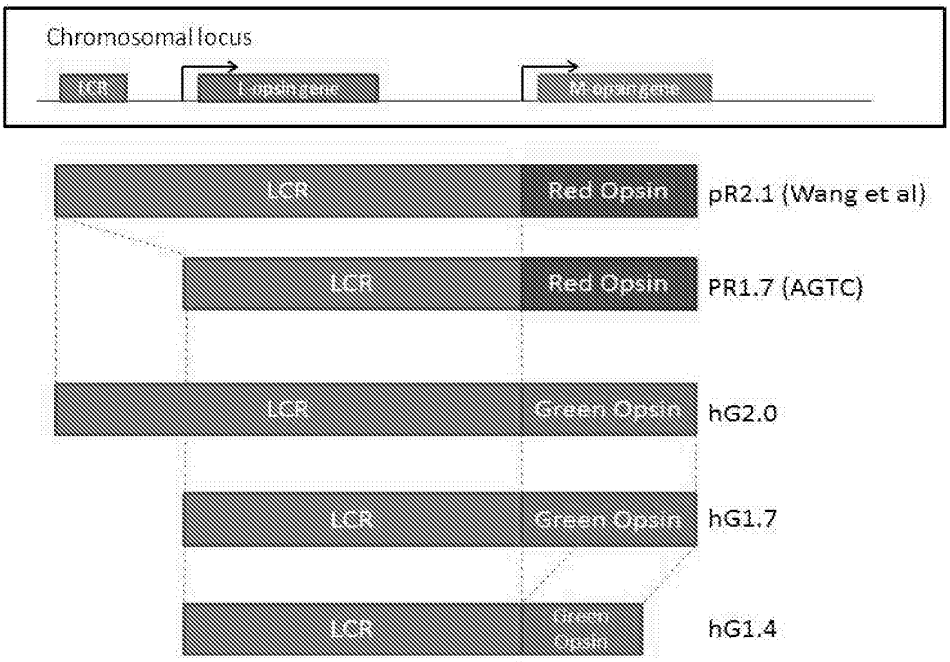

Chromosomal locus
LCR
Red Opsin
Green Opsin
LCR
Red Opsin
pR2.1 (Wang et al)
LCR
Red Opsin
PR1.7 (AGTC)
LCR
Green Opsin
hG2.0
LCR
Green Opsin
hG1.7
LCR
Green Opsin
hG1.4

Figure 2

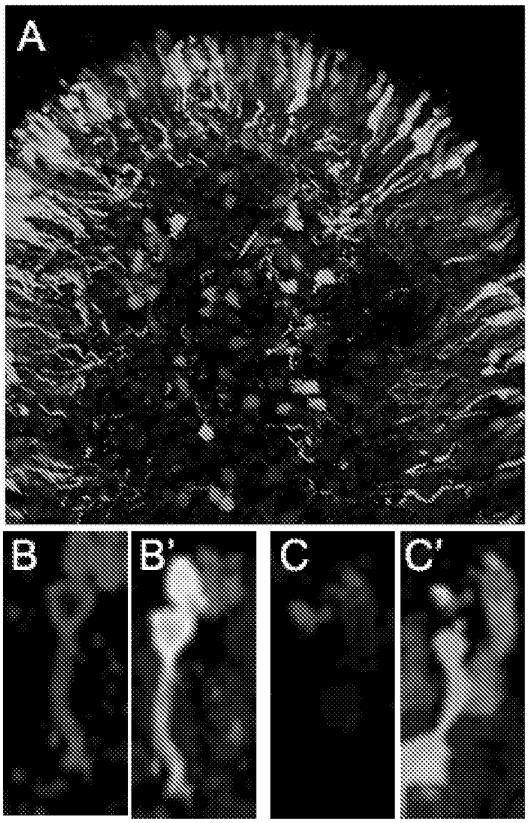


Figure 3

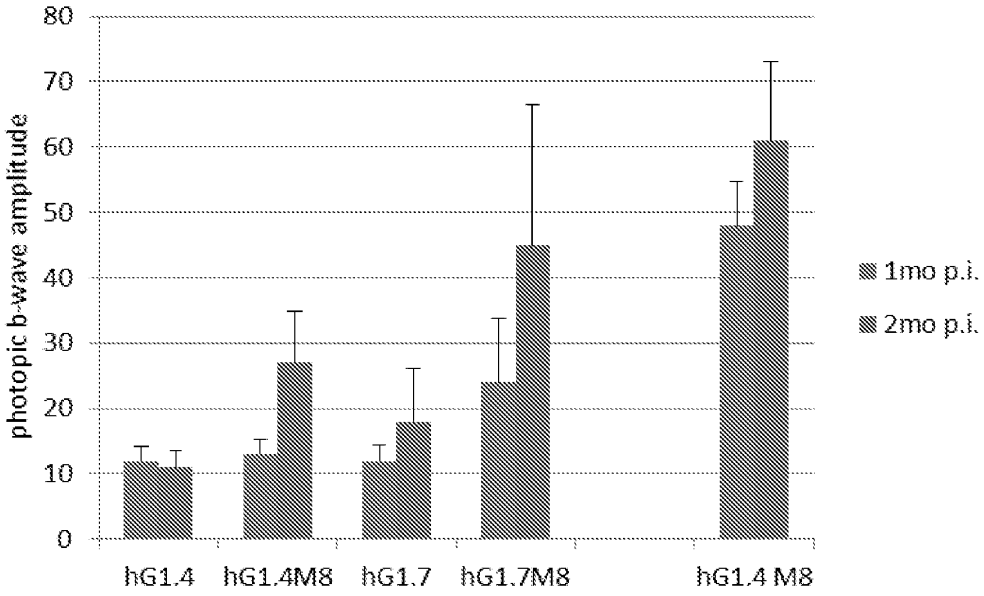

80
70
60
50
40
30
20
10
0
photopic b-wave amplitude
hG1.4
hG1.4M8
hG1.7
hG1.7M8
hG1.4 M8
1mo p.i.
2mo p.i.

Figure 4

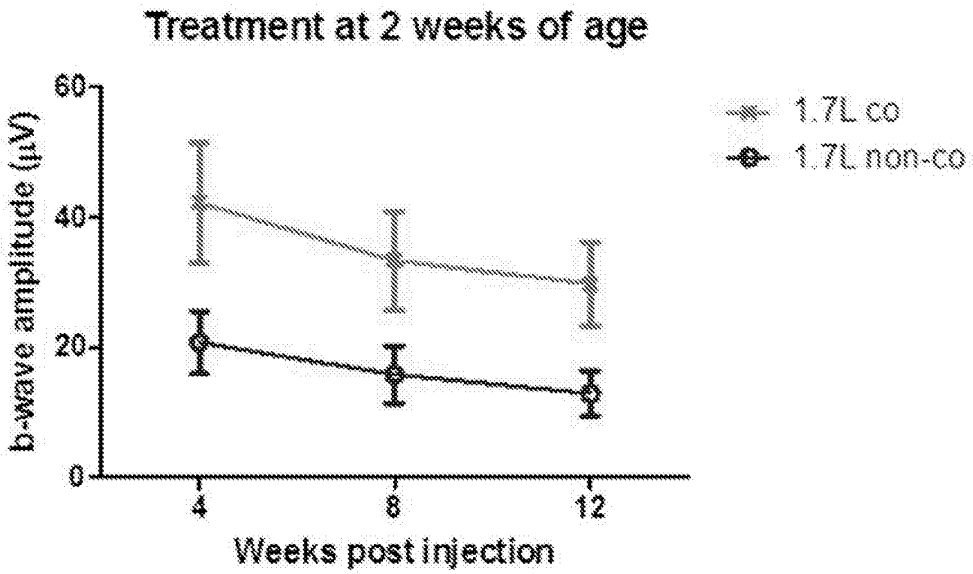
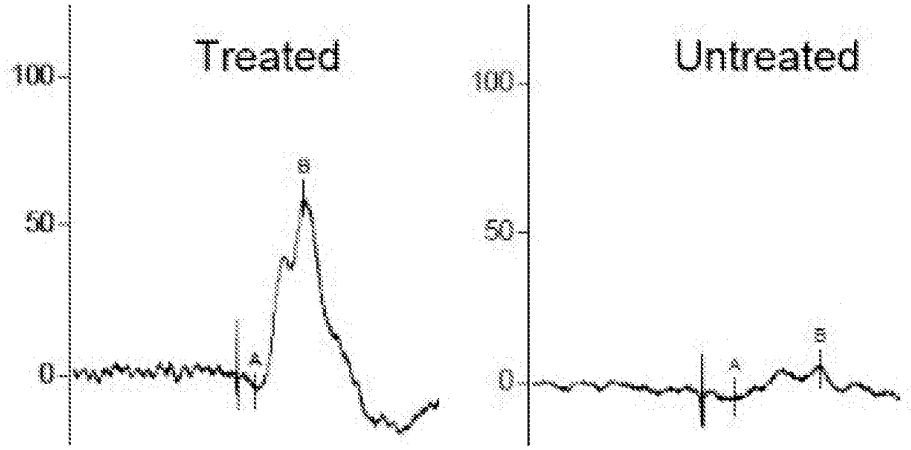

Treatment at 2 weeks of age
b-wave amplitude (µV)
60
40
20
0
4
8
12
Weeks post injection
1.7L co
1.7L non-co

Figure 5

A


Treated
Untreated
100
50
0
100
50
0
A
B
A
B

B

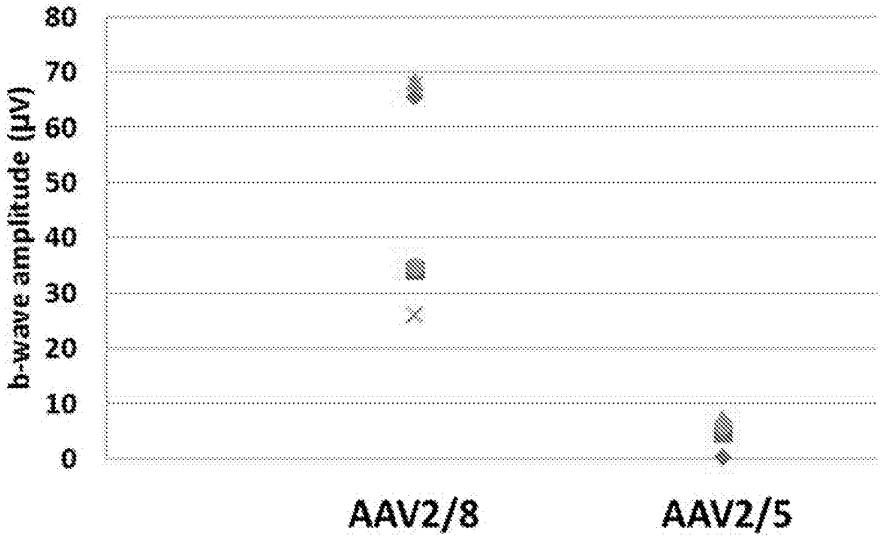

b-wave amplitude (µV)
80
70
60
50
40
30
20
10
0
AAV2/8
AAV2/5

Figure 6

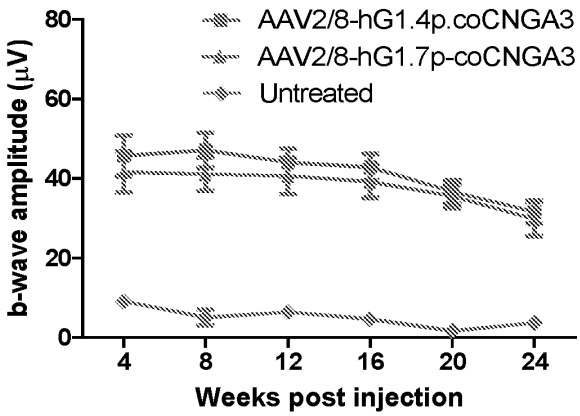

AAV2/8-hG1.4p.coCNGA3
AAV2/8-hG1.7p-coCNGA3
Untreated
b-wave amplitude (μV)
80
60
40
20
0
4
8
12
16
20
24
Weeks post injection

Figure 7

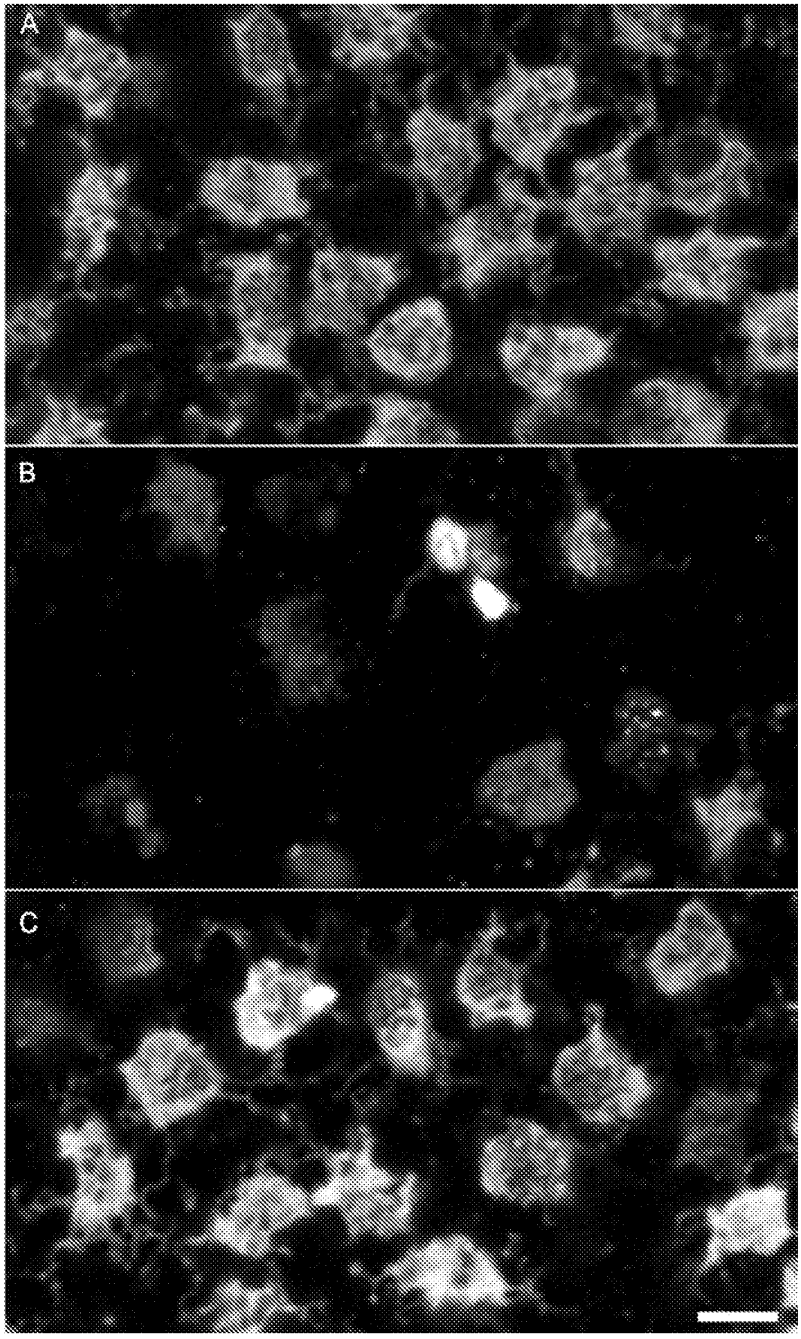


Figure 8

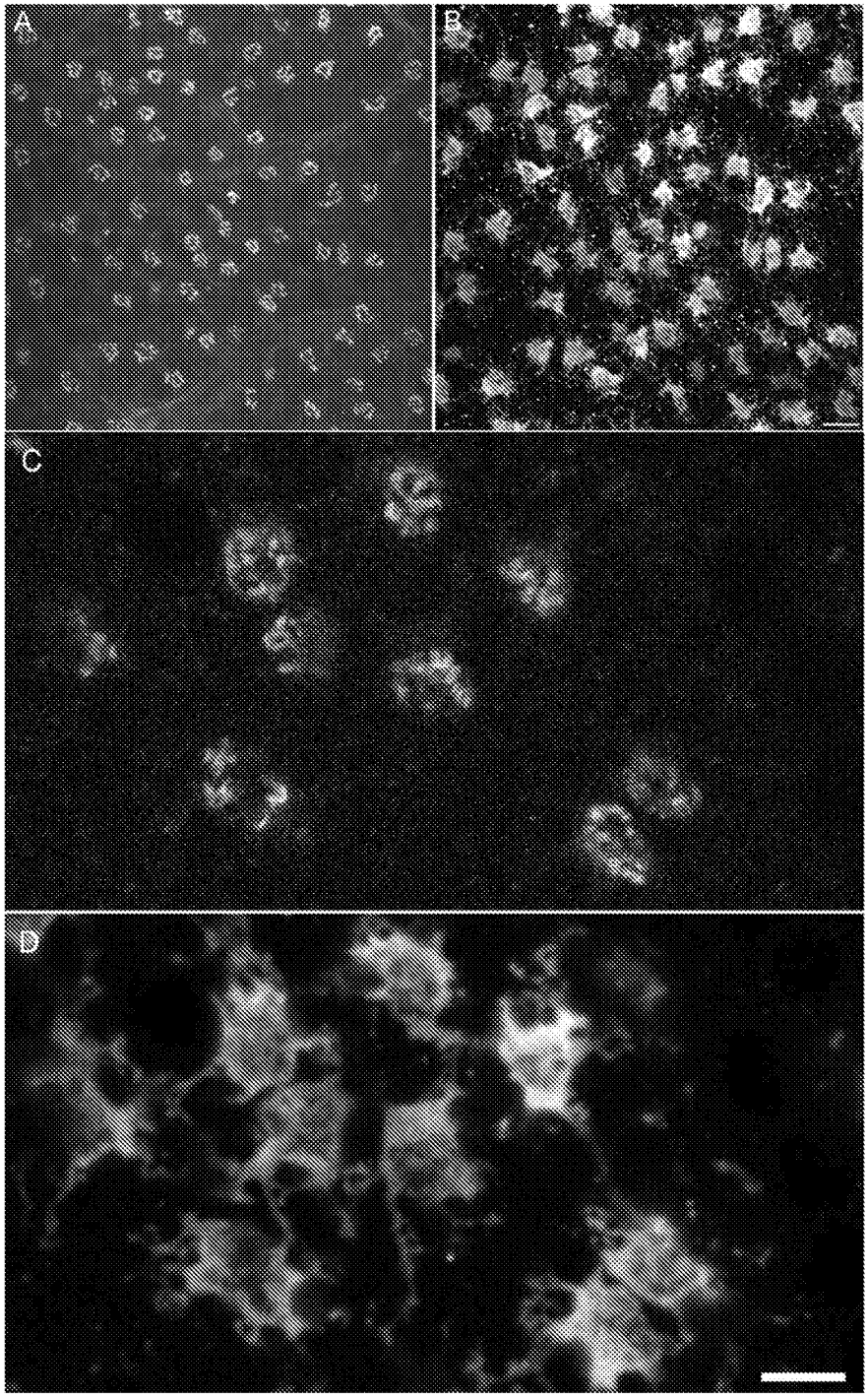
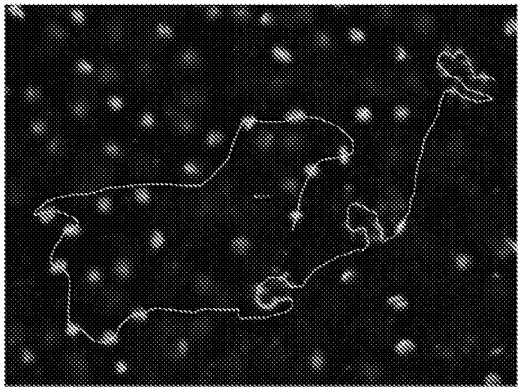
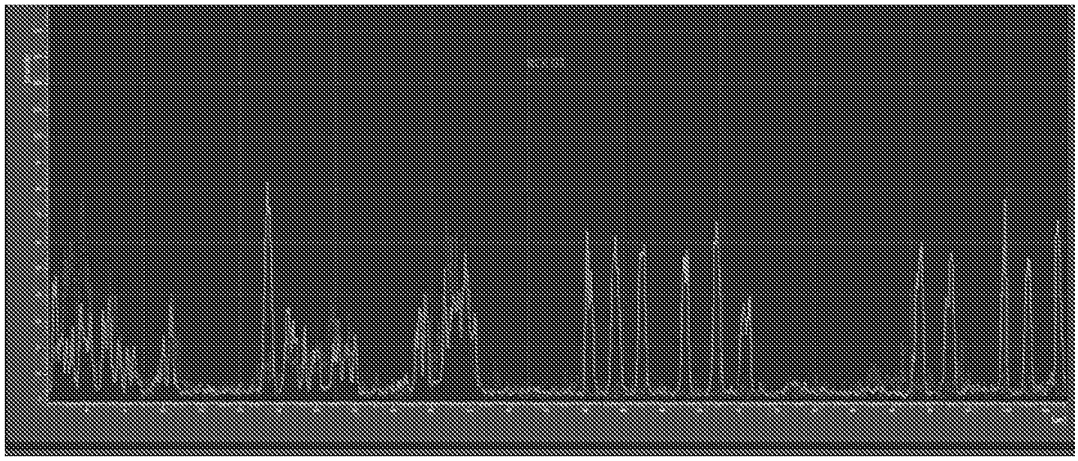


Figure 9

A



B



C

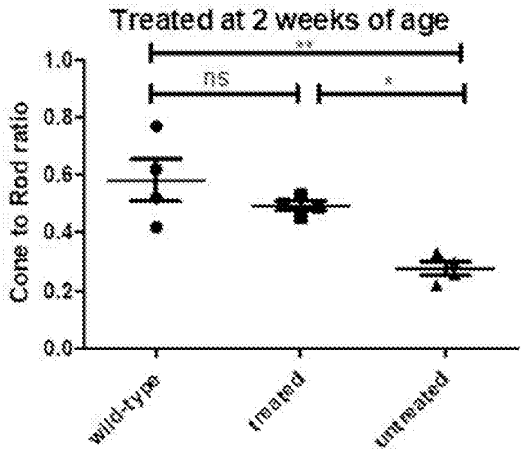
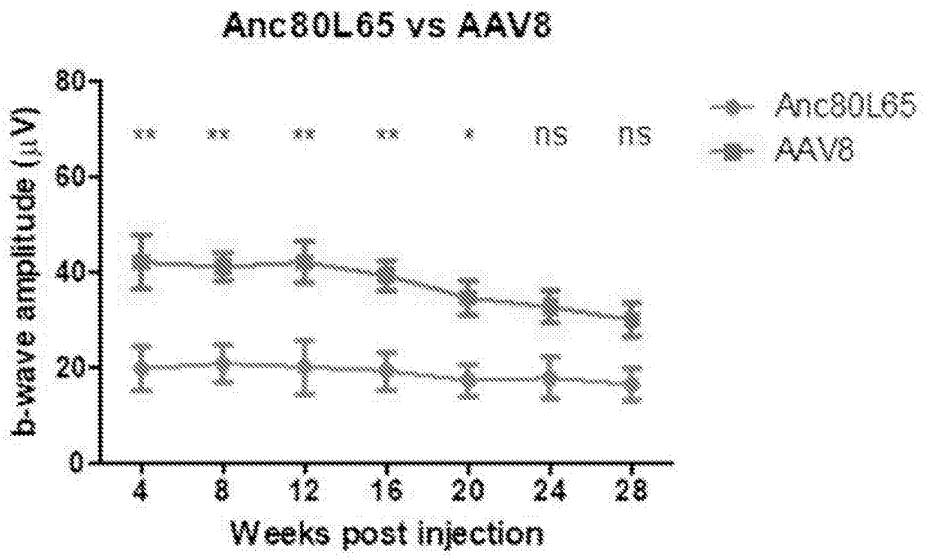


Figure 10

A


Anc80L65 vs AAV8
b-wave amplitude (μV)
80
60
40
20
0
** ** ** ** * ns ns
4 8 12 16 20 24 28
Weeks post injection
Anc80L65
AAV8

B

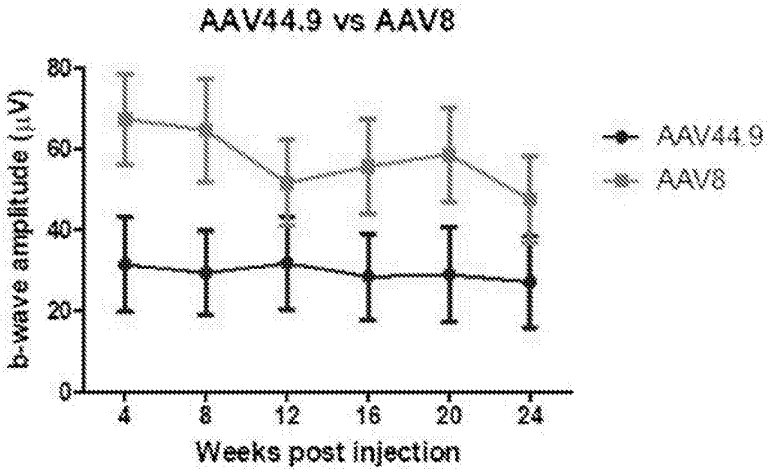

AAV44.9 vs AAV8
b-wave amplitude (μV)
80
60
40
20
0
4 8 12 16 20 24
Weeks post injection
AAV44.9
AAV8

Figure 11

C

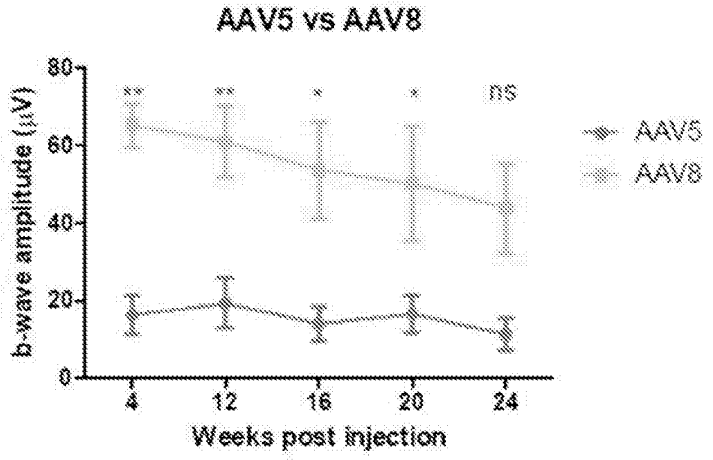
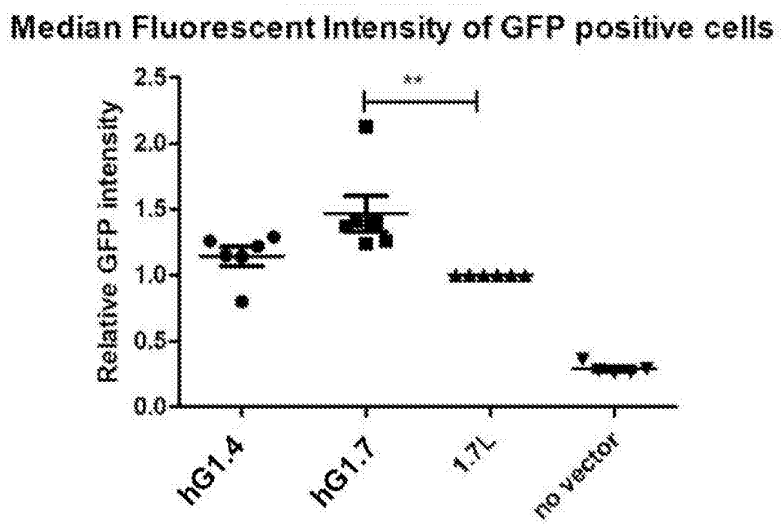


Figure 11 (continued)

A


Median Fluorescent Intensity of GFP positive cells
Relative GFP intensity
2.5
2.0
1.5
1.0
0.5
0.0
**
hG1.4
hG1.7
1.7L
no vector

B

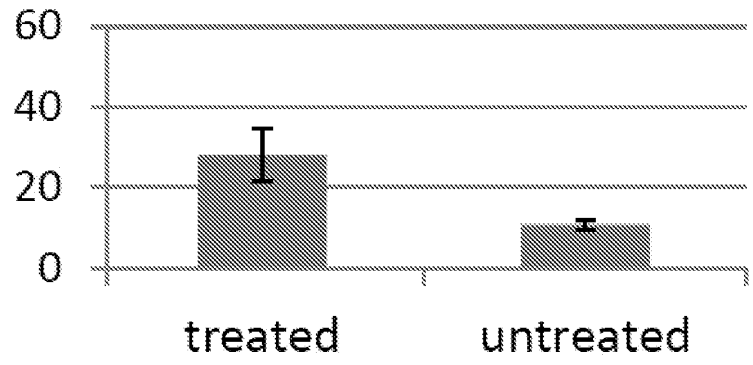

60
40
20
0
treated
untreated

Figure 12