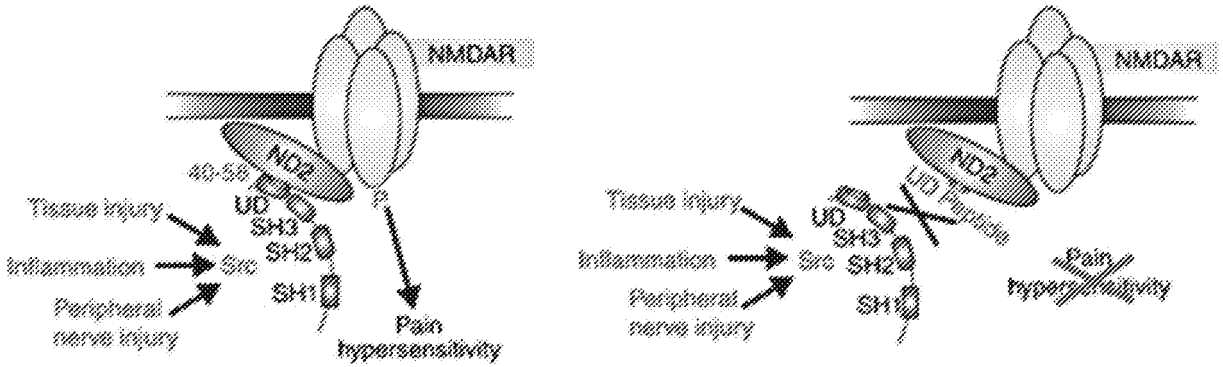
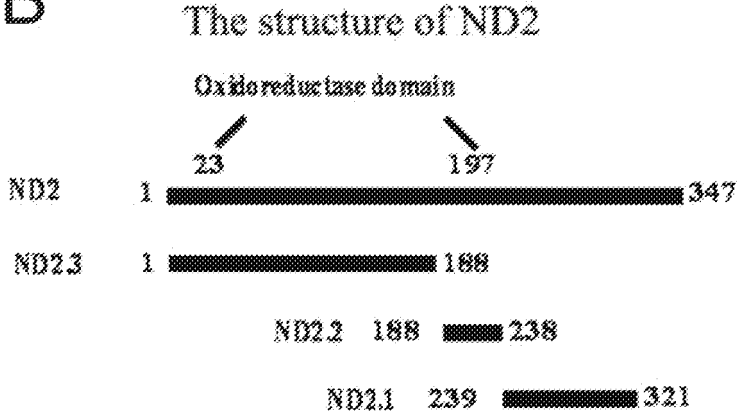
Figures 1A, B, C

A

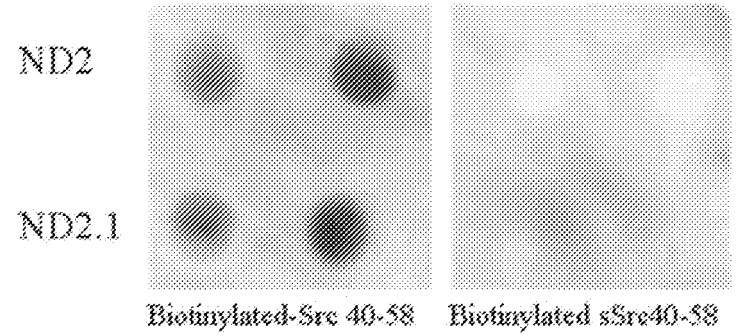


Xiao Jun Liu & Michael W Salter et al Nature Medicine 14, 1325 (2008)

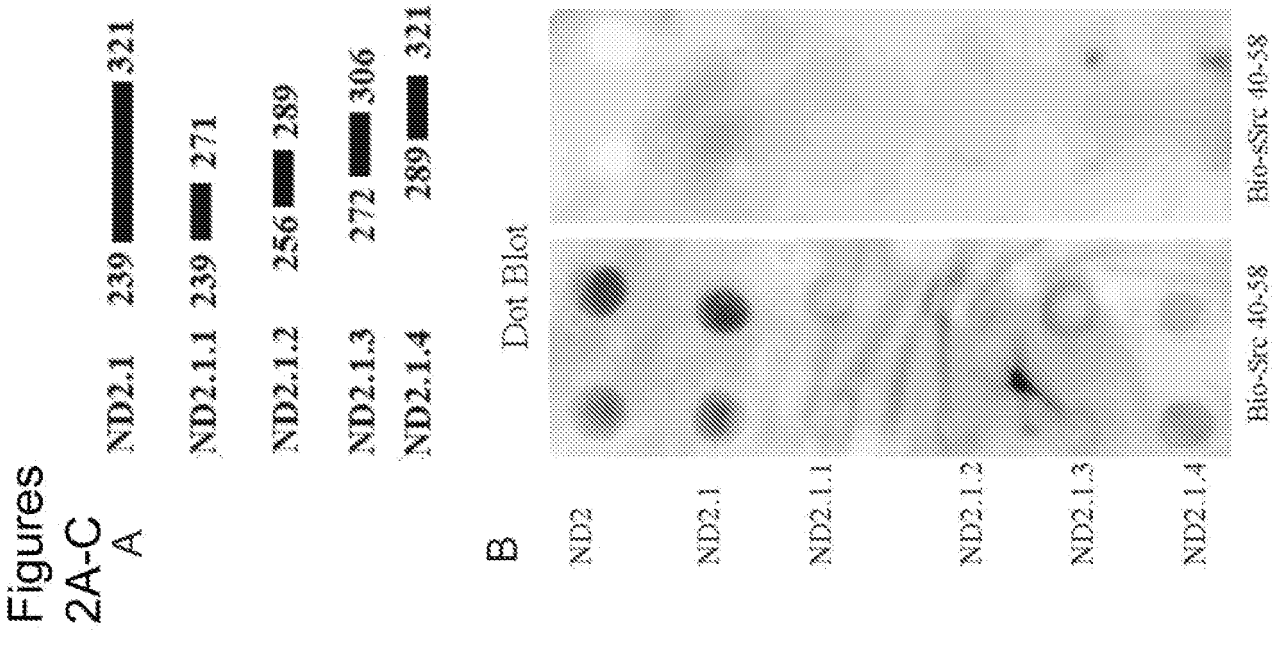
B



C



Figures 2A-C


A
ND2.1 239 321
ND2.1.1 239 271
ND2.1.2 256 289
ND2.1.3 272 306
ND2.1.4 289 321
B
Dot Blot
ND2
ND2.1
ND2.1.1
ND2.1.2
ND2.1.3
ND2.1.4
Bio-Src 40-58
Bio-sSrc 40-58
C
Biotinylated Src 40-58
Absorbance 405 nm
ND2
ND2.1
ND2.1.4
0
2ug
4ug
Biotinylated sSrc40-58
Absorbance 405 nm

Figures 3A-C

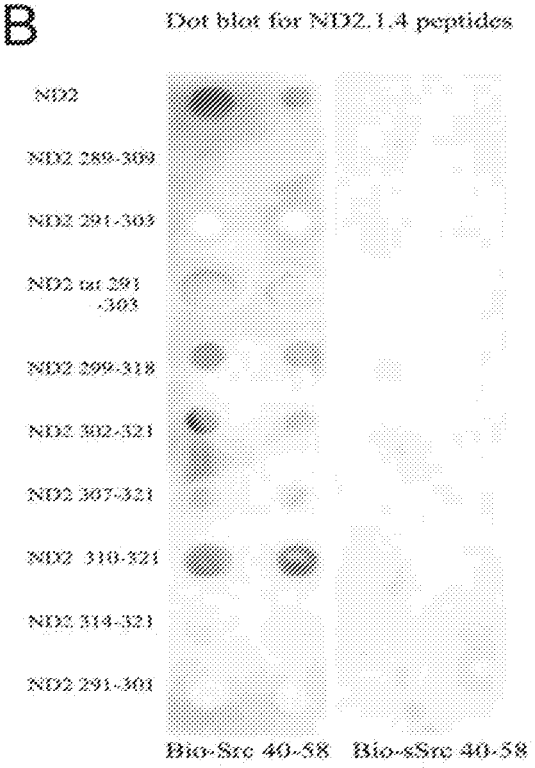
Isolation of specific segment of ND2 responsible for interaction with Src40-58

A

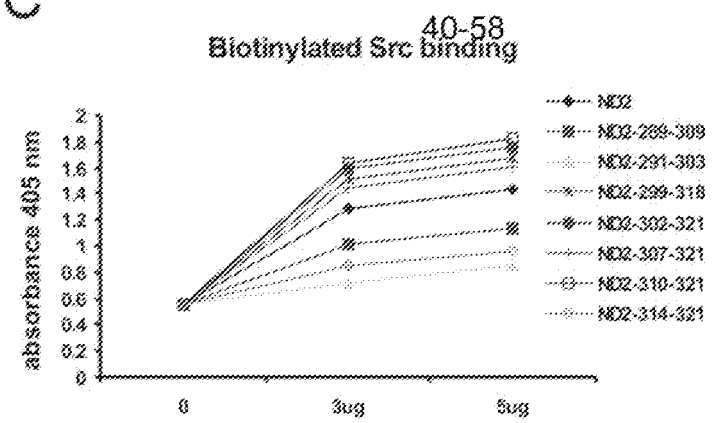
ND2.1.4 NLYFYLRLIYSTSITLLPMSNNVKMKWQFEHTK (289-321)

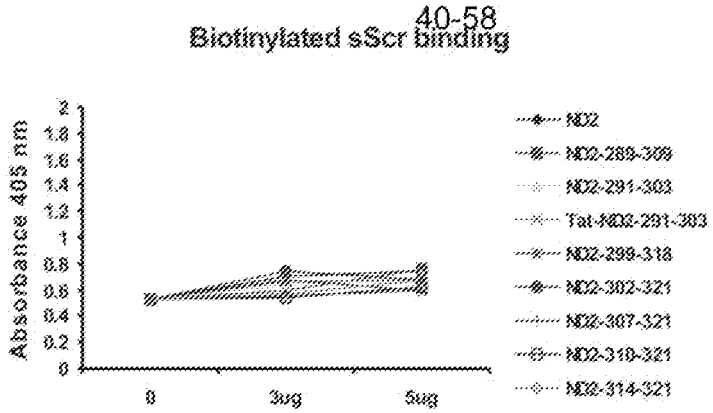
1. ND2 289-309 First 21 aa: NLYFYLRLIYSTSITLLPMSN
2. ND2 291-303 YFYLRLIYSTSIT
3. Tat-ND2 291-303 YGRKKRRQRRR YFYLRLIYSTSIT
4. ND2 299-318 STSITLLPMSNNVKMKWQFE
5. ND2 302-321 ITLLPMSNNVKMKWQFEHTK
6. ND2 307-321 MSNNVKMKWQFEHTK
7. ND2 310-321 NVKMKWQFEHTK
8. ND2 314-321 KWQFEHTK

B

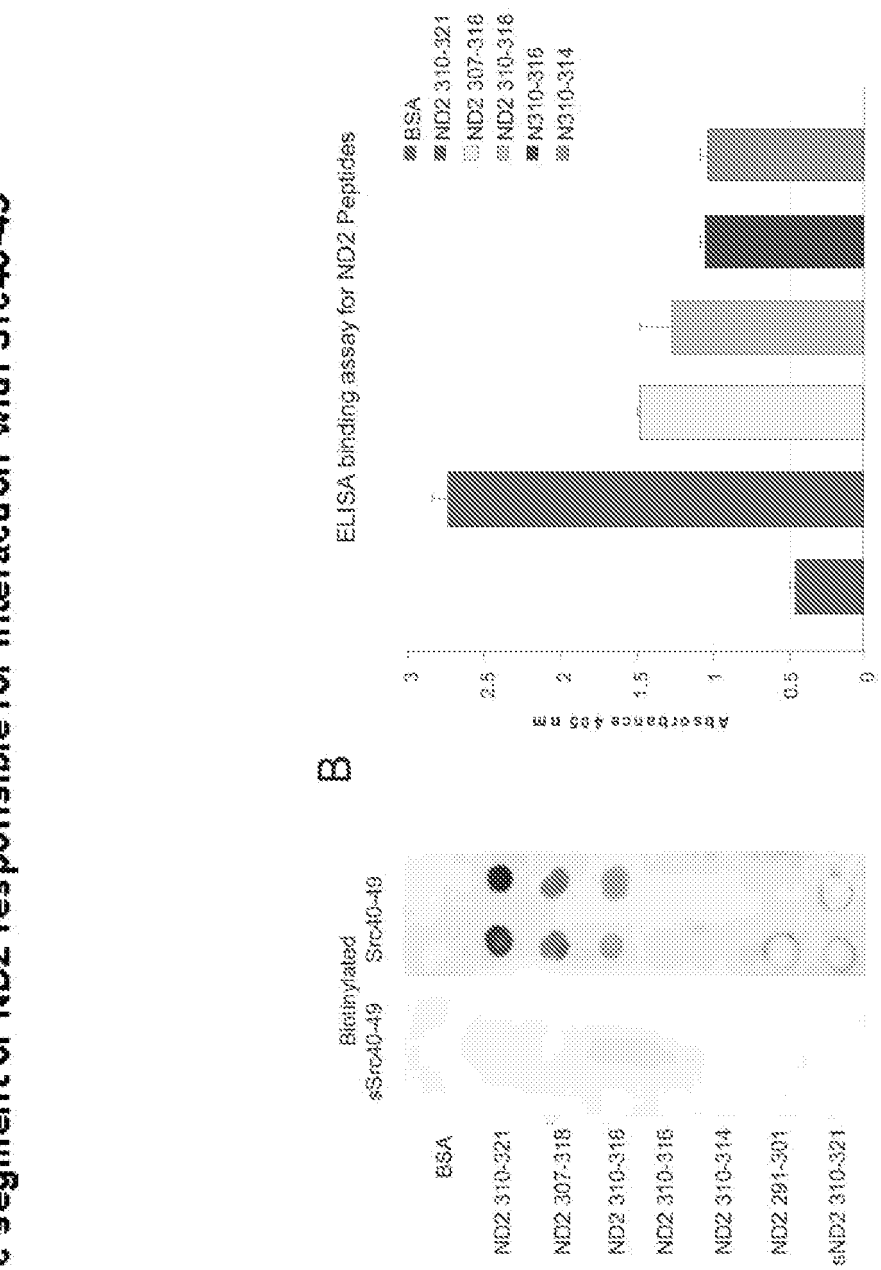


C





Figures
4A, B Isolation of specific segment of ND2 responsible for interaction with Src40-49



Figures 5A-E

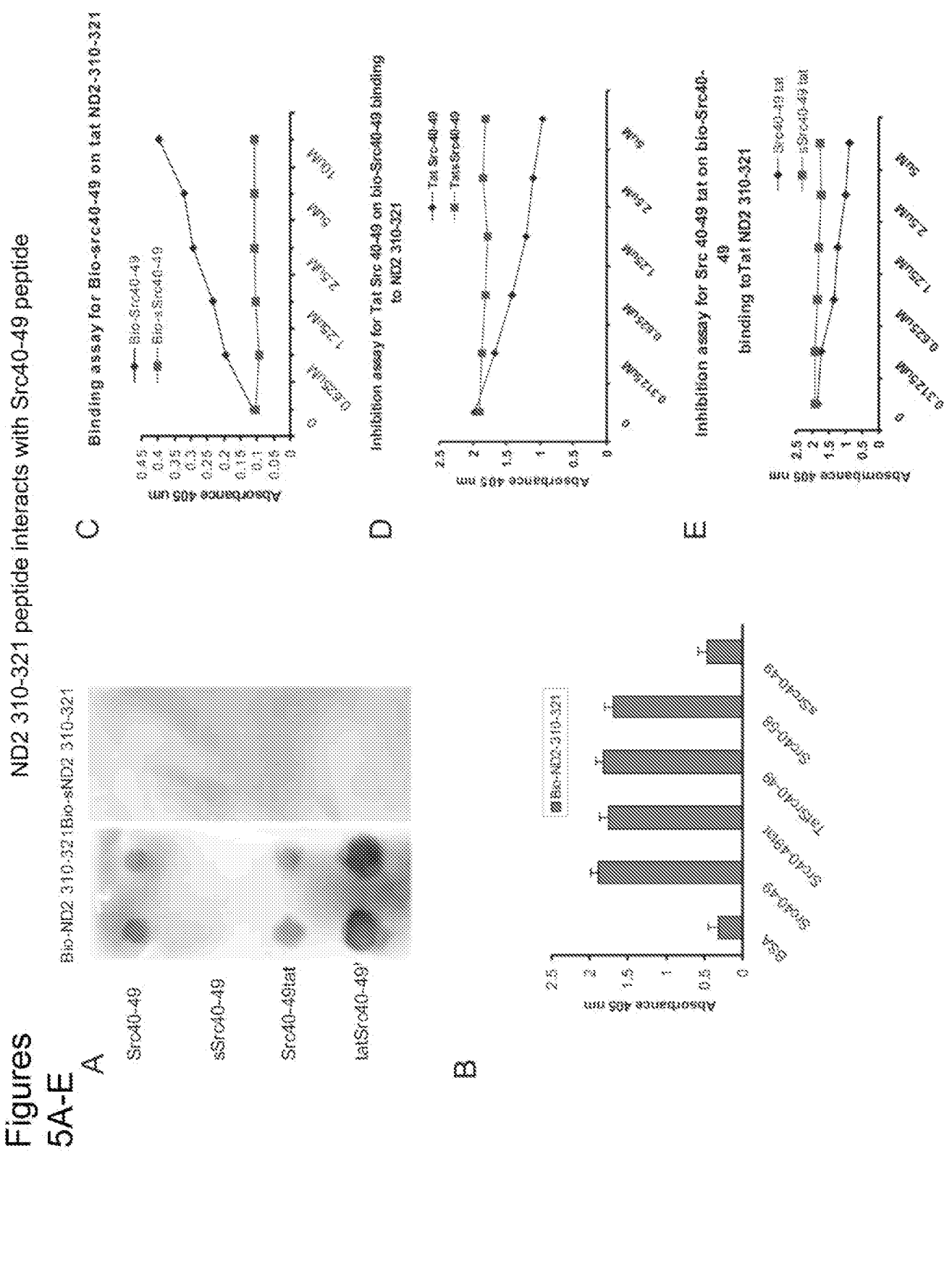

A
Bio-ND2 310-321
Bio-sND2 310-321
Src40-49
sSrc40-49
Src40-49tat
tatSrc40-49
B
Bio-ND2-310-321
Absorbance 405 nm
BSA
Src40-49
Src40-49tat
tatSrc40-49
Src40-58
sSrc40-49
C
Binding assay for Bio-src40-49 on tat ND2-310-321
Bio-Src40-49
Bio-sSrc40-49
Absorbance 405 um
D
Inhibition assay for Tat Src 40-49 on bio-Src40-49 binding to ND2 310-321
Tat Src-40-49
TatsSrc40-49
Absorbance 405 nm
E
Inhibition assay for Src 40-49 tat on bio-Src40-49
binding toTat ND2 310-321
Src40-49 tat
sSrc40-49 tat
Absorbance 405 nm

Figure 6

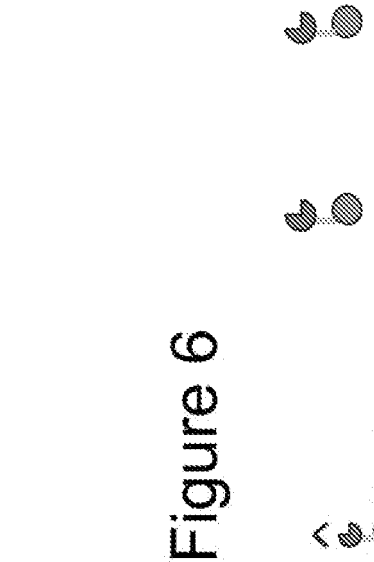
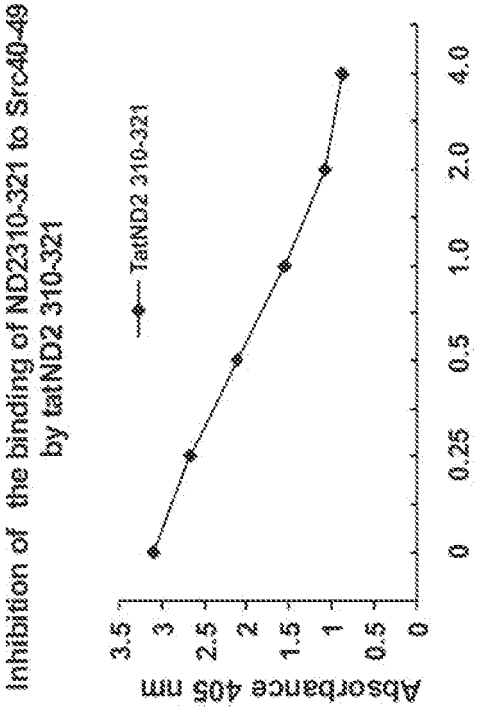
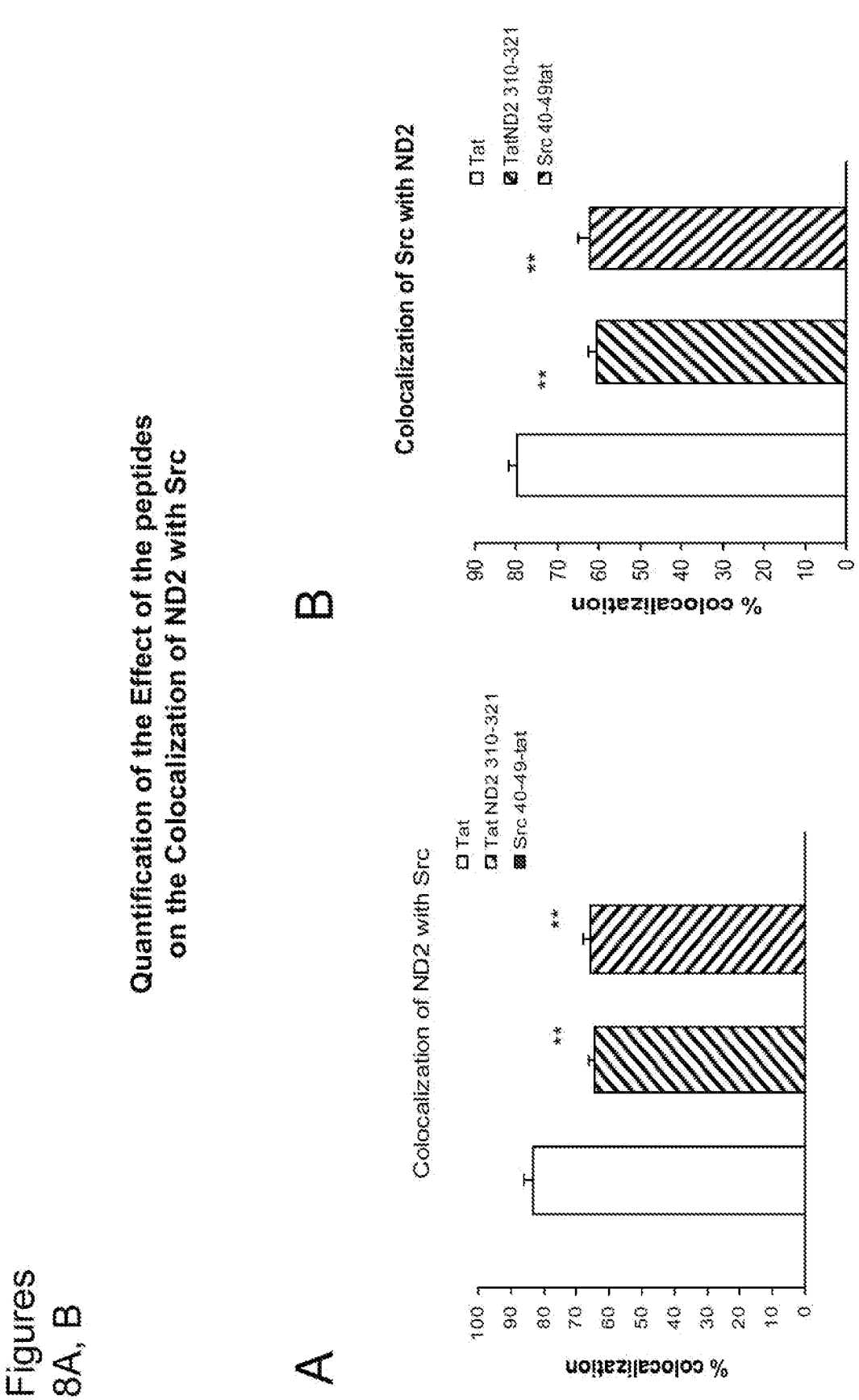


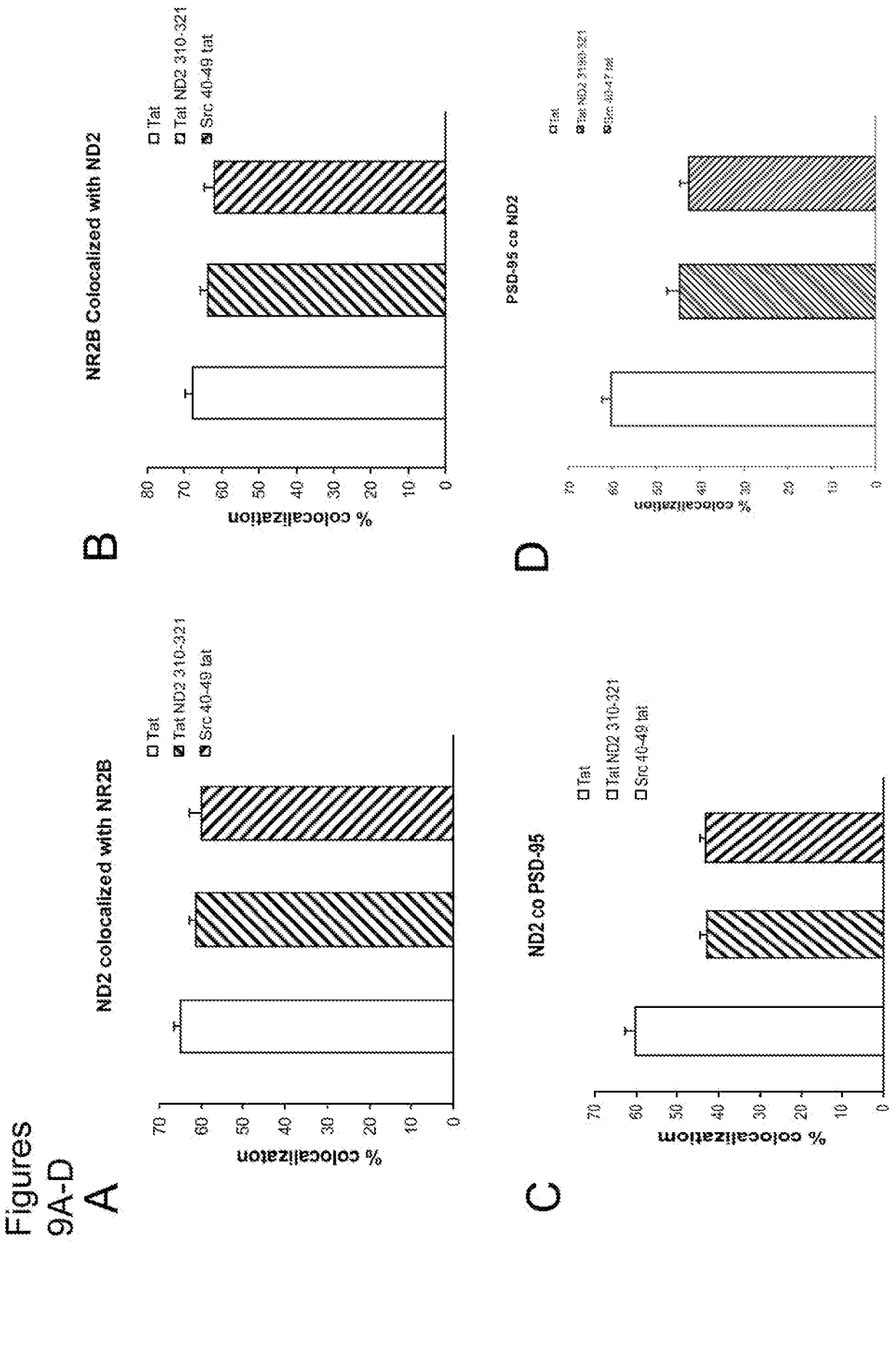
Figure 7



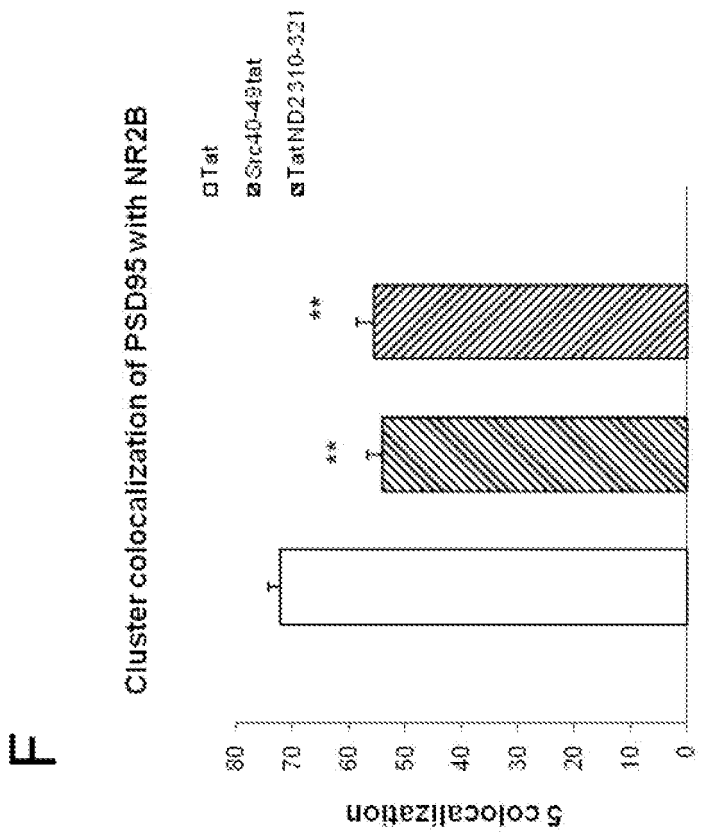
Figures
8A, B


Quantification of the Effect of the peptides on the Colocalization of ND2 with Src
A
Colocalization of ND2 with Src
Tat
Tat ND2 310-321
Src 40-49-tat
% colocalization
100
90
80
70
60
50
40
30
20
10
0
**
**
B
Colocalization of Src with ND2
Tat
TatND2 310-321
Src 40-49tat
% colocalization
90
80
70
60
50
40
30
20
10
0
**
**

Figures 9A-D


A
ND2 colocalized with NR2B
Tat
Tat ND2 310-321
Src 40-49 tat
% colocalization
0
10
20
30
40
50
60
70
B
NR2B Colocalized with ND2
Tat
Tat ND2 310-321
Src 40-49 tat
% colocalization
0
10
20
30
40
50
60
70
80
C
ND2 co PSD-95
Tat
Tat ND2 310-321
Src 40-49 tat
% colocalization
0
10
20
30
40
50
60
70
D
PSD-95 co ND2
Tat
% colocalization

Figures 9E-F


F
Cluster colocalization of PSD95 with NR2B
Tat
Src40-49tat
TatND2310-321
% colocalization
0
10
20
30
40
50
60
70
80
**
**

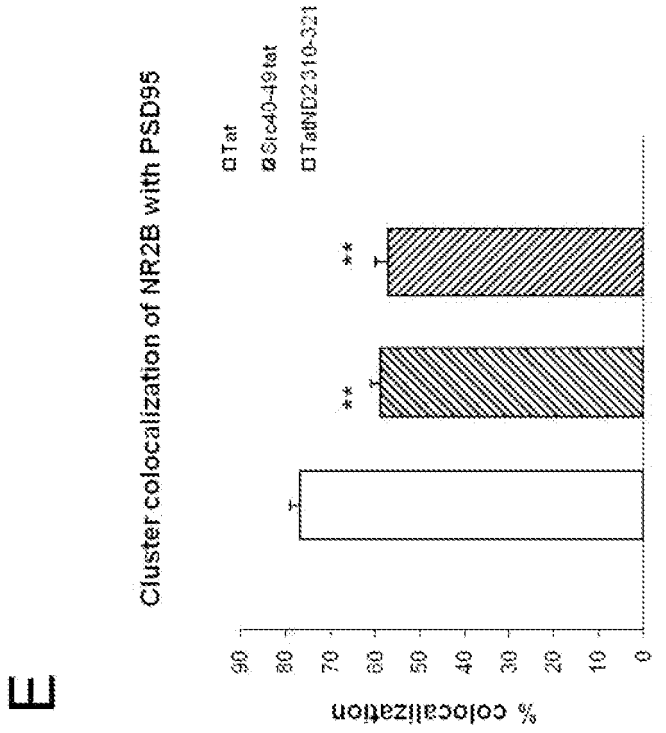

E
Cluster colocalization of NR2B with PSD95
Tat
Src40-49tat
TatND2310-321
% colocalization
0
10
20
30
40
50
60
70
80
90
**
**

Figure 10

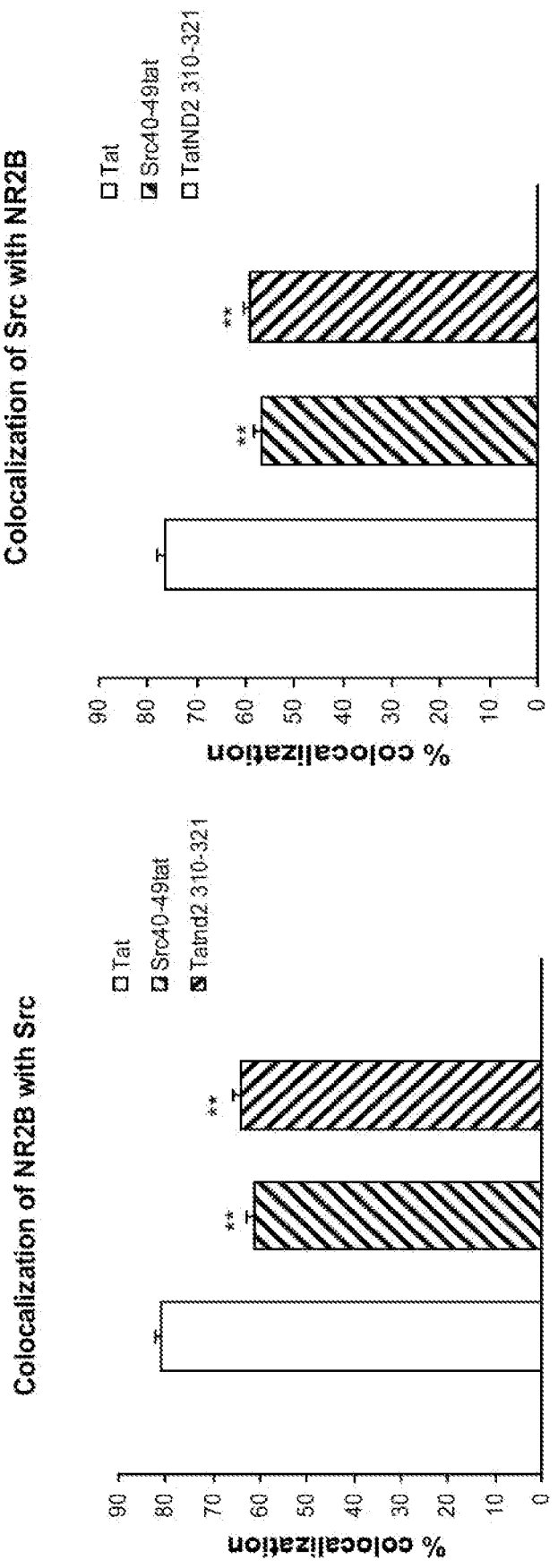
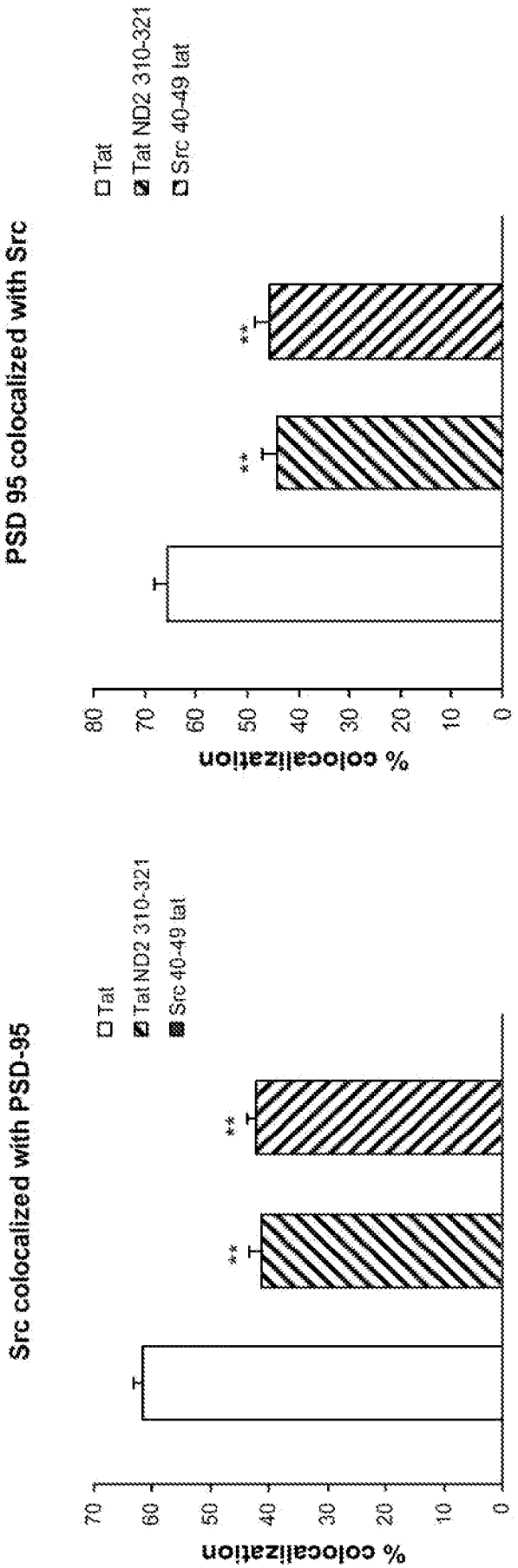

Colocalization of NR2B with Src
Tat
Src40-49tat
Tatnd2 310-321
% colocalization
0
10
20
30
40
50
60
70
80
90
**
**
Colocalization of Src with NR2B
Tat
Src40-49tat
TatND2 310-321
% colocalization
0
10
20
30
40
50
60
70
80
90
**
**

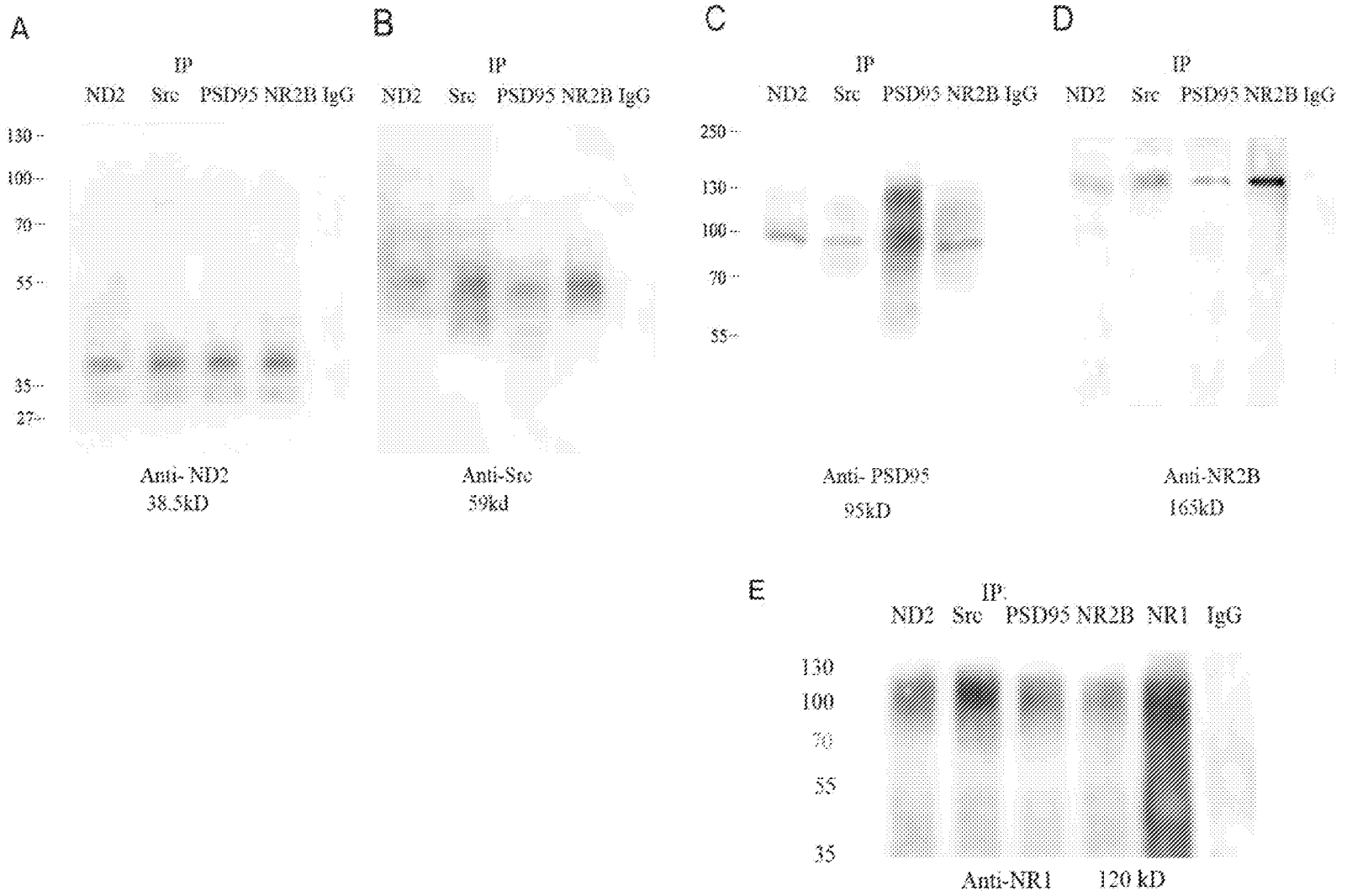
Figure 11

Quantification of the effect of the peptides on the colocalization of PSD95 with Src

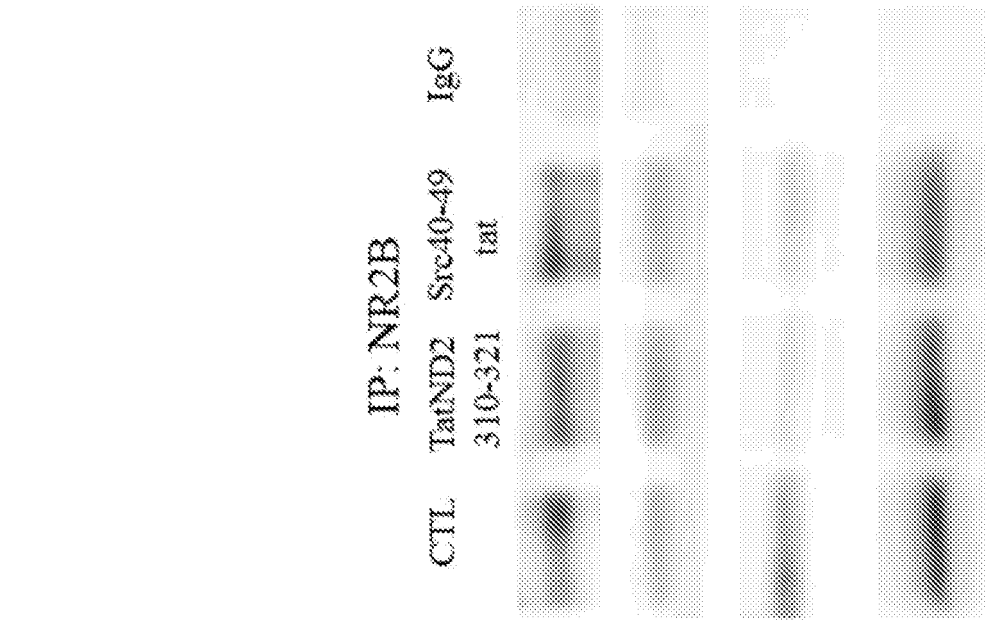


Figures 12A-E

A complex of the ND2, Src,PSD95,NR2B and NR1 in rat brain lysates

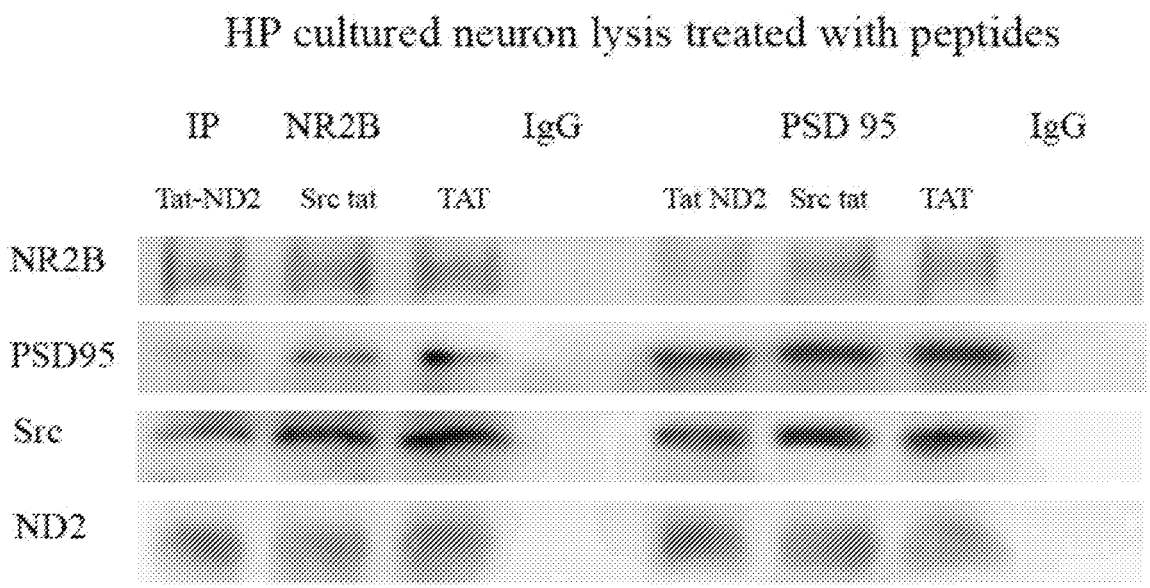


Figures
13A, B

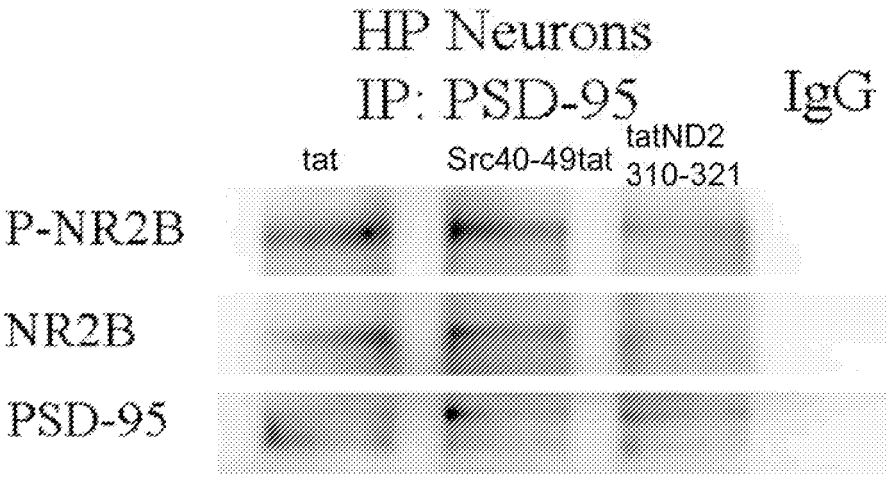


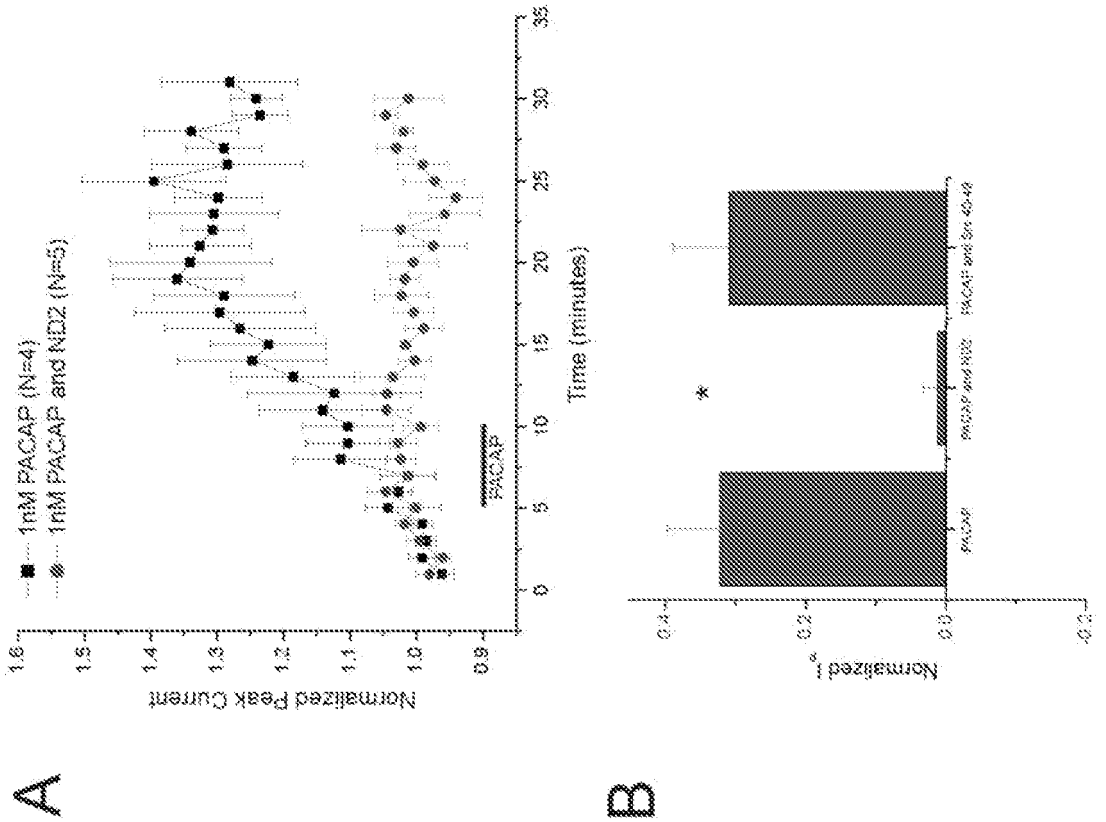
Figures
13C, D

C



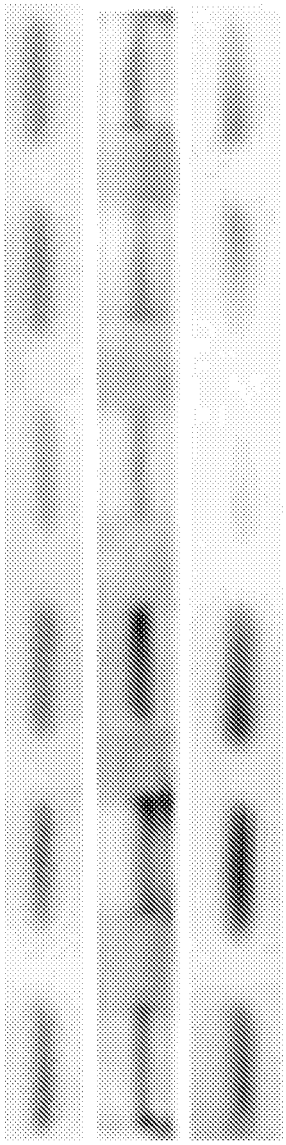
D





Figures 14A, B

Figure 15



Figures
16A, B

Effect of Src-TAT and TAT-ND2 on interactions after 2 hours 3PVO ischemia in rats

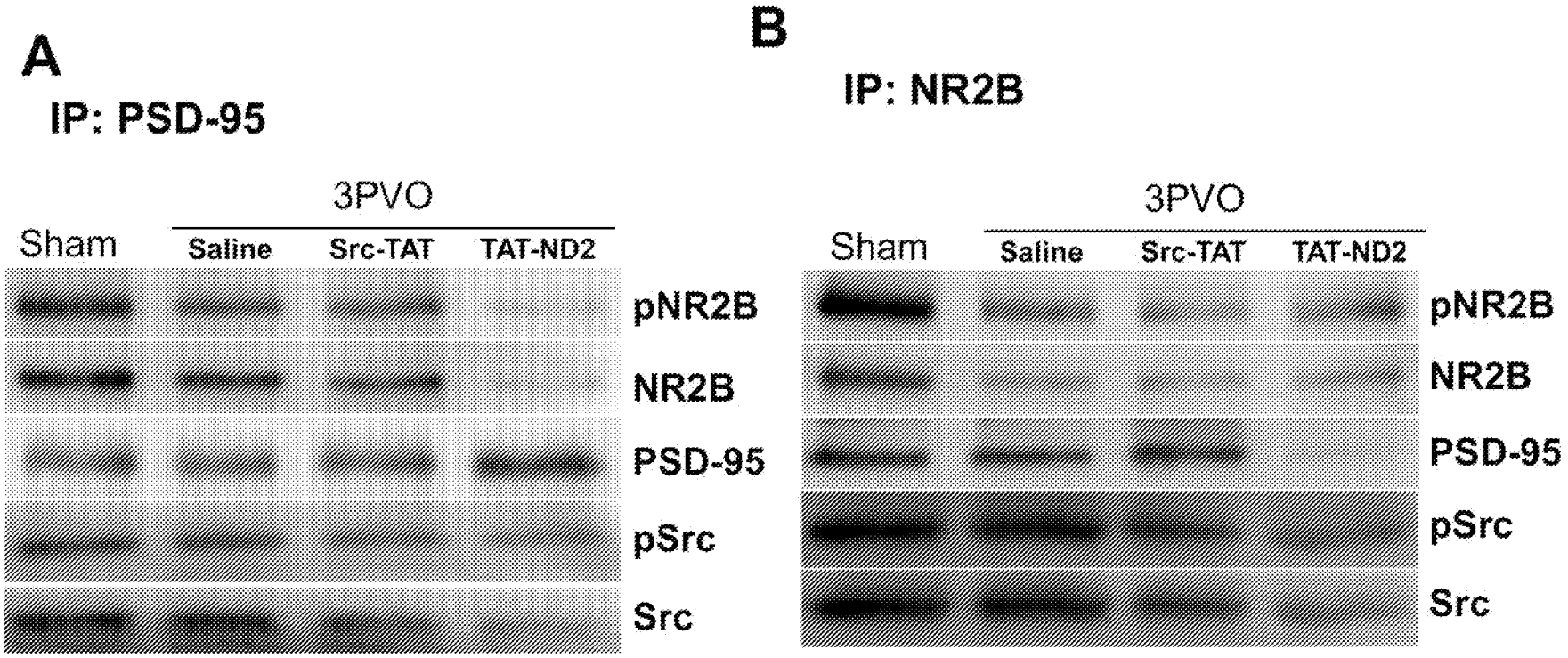
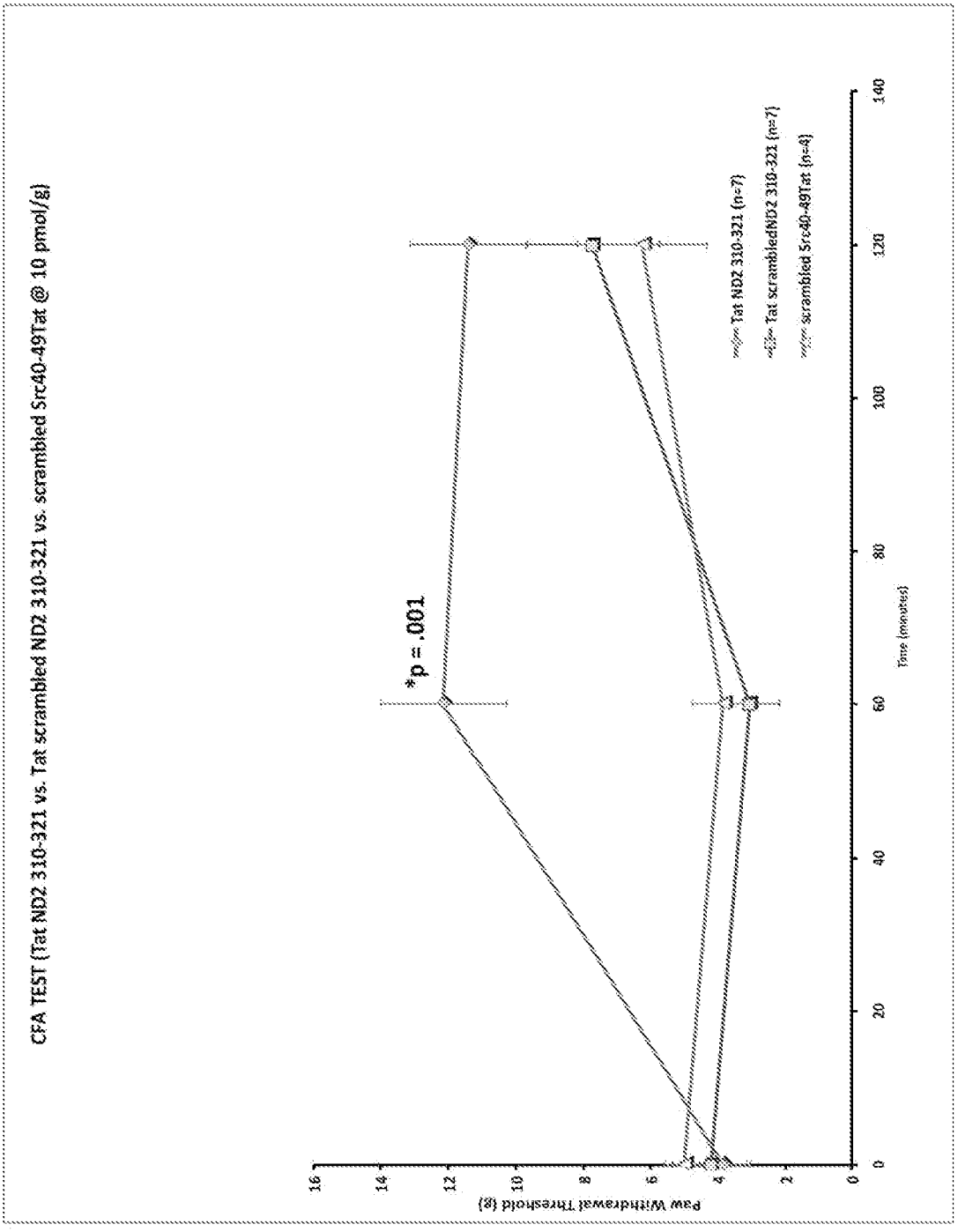


Figure 17


CFA TEST (Tat ND2 310-321 vs. Tat scrambled ND2 310-321 vs. scrambled Src40-49Tat @ 10 pmol/g)
*p = .001
Paw Withdrawal Threshold (g)
Time (minutes)
Tat ND2 310-321 (n=7)
Tat scrambledND2 310-321 (n=7)
scrambled Src40-49Tat (n=4)
0
2
4
6
8
10
12
14
16
0
20
40
60
80
100
120
140

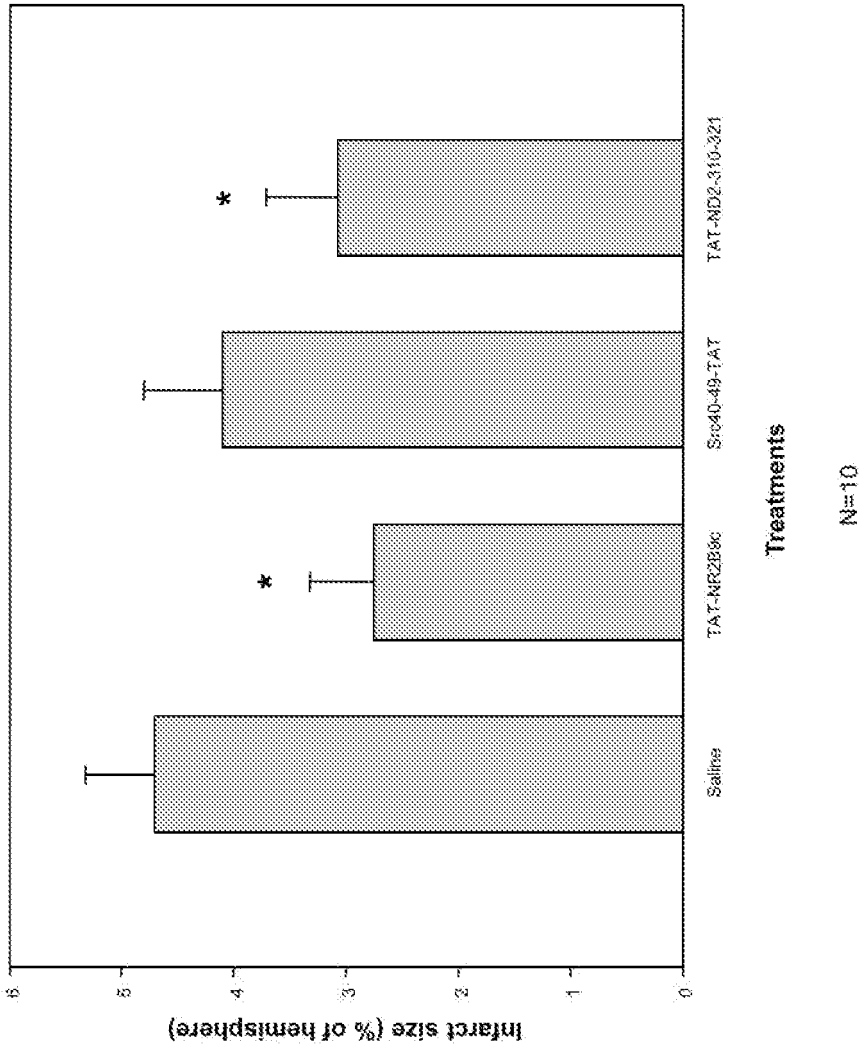

Infarct size (% of hemisphere)
0
1
2
3
4
5
6
*
*
Saline
TAT-NR2B9c
Src40-49-TAT
TAT-ND2-310-321
Treatments
N=10

Figure 18

Figure 19

```
seq  MNPLAQPVIY STIFAGTLIT ALSSHWFFTW VGLEMNMLAF IPVLTKKMNP    50
pred CCccCCCCHH HHHHHHHHHH HHHHHHHHHH HHHHiiiiii iiiiiiiiii

seq  RSTEAAIKYF LTQATASMIL LMAILFNNML SGQWTMTNTT NQYSSLMIMM   100
pred iiiiiiiiii iiiHHHHHHH HHHHHHHHHH Hccccccccc CCCCCHHHHH

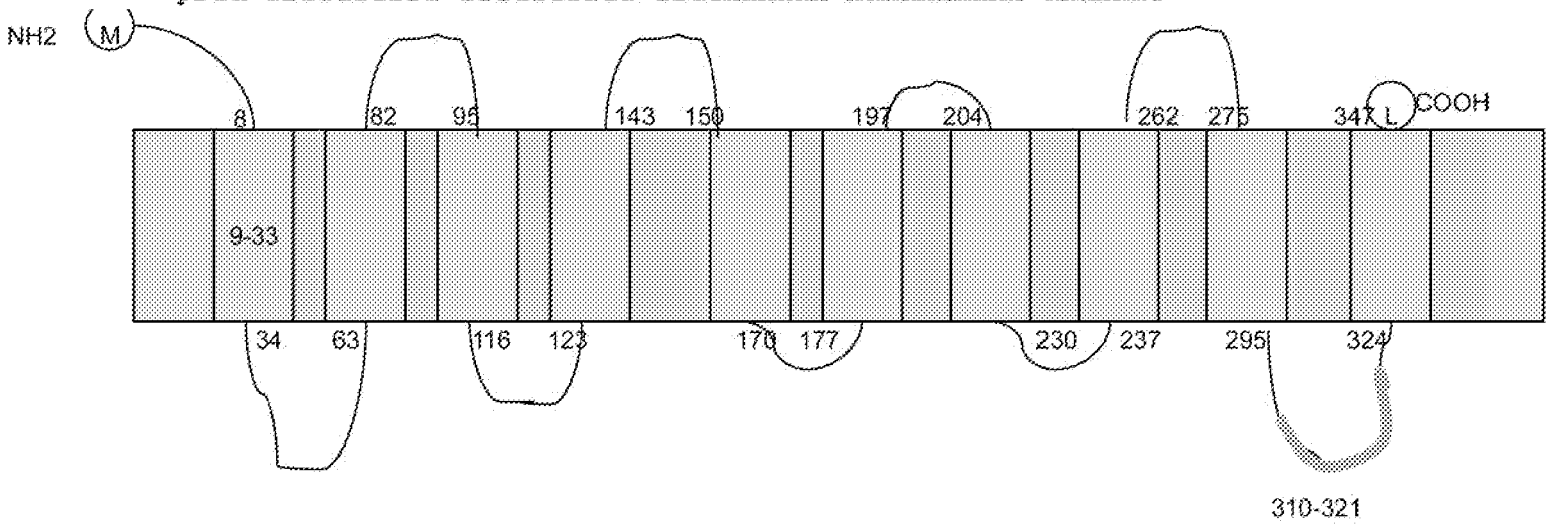
seq  AMAMKLGMAP FHFWVPEVTQ GTPLTSGLLL LTWQKLAPIS INYQISPSLN   150
pred HHHHHHHHHH HHHHHiiiii iiiHHHHHHH HHHHHHHHHH HHccccccCC

seq  VSLLLTLSIL SIMAGSWGGL NQTQLRKILA YSSITHMGWM MAVLPYNPNM   200
pred HHHHHHHHHH HHHHHHHHHi iiiiiiiHHH HHHHHHHHHH HHHHHHcccc

seq  TILNLTIYII LTTTAFLLLN LNSSTTTLLL SRTWNKLTWL TPLIPSTLLS   250
pred CCCCHHHHHH HHHHHHHHHH HHHHHHHHHi iiiiiiiHHH HHHHHHHHHH

seq  LGGLPPLTGF LPKWAIIEEF TKNNSLIIPT IMATITLLNL YFYLRLIYST   300
pred HHHHHHHHHH Hccccccccc CCCCCHHHHH HHHHHHHHHH HHHHiiiiii

seq  SITLLPMSNN VKMKWQFEHT KPTPFLPTLI ALTTLLLPIS PFMLMIL  347
pred iiiiiiiiii iiiiiiiiii iiiiHHHHHH HHHHHHHHHH HHHHHHo
```



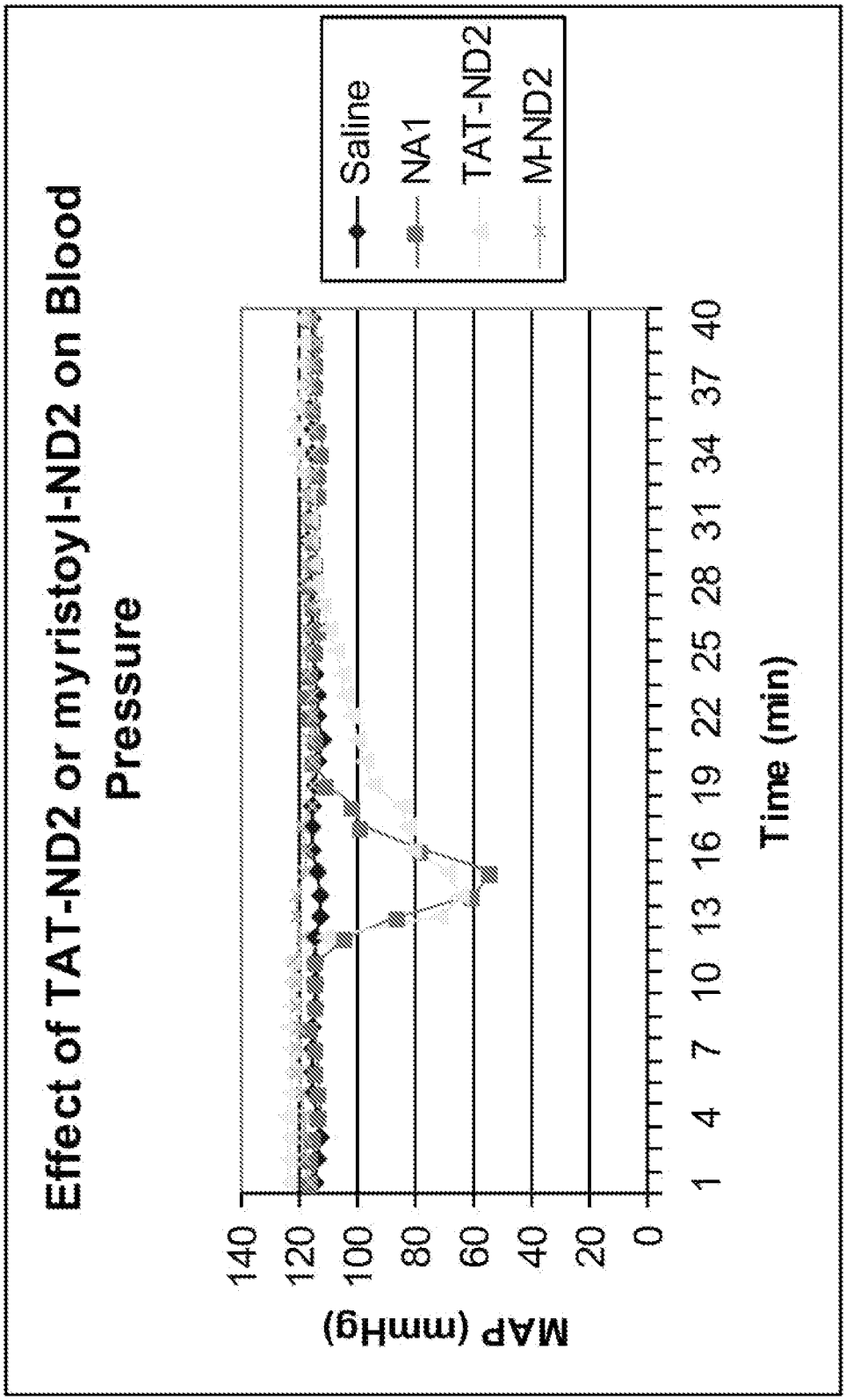

Effect of TAT-ND2 or myristoyl-ND2 on Blood Pressure
Saline
NA1
TAT-ND2
M-ND2
MAP (mmHg)
140
120
100
80
60
40
20
0
1
4
7
10
13
16
19
22
25
28
31
34
37
40
Time (min)

Figure 20

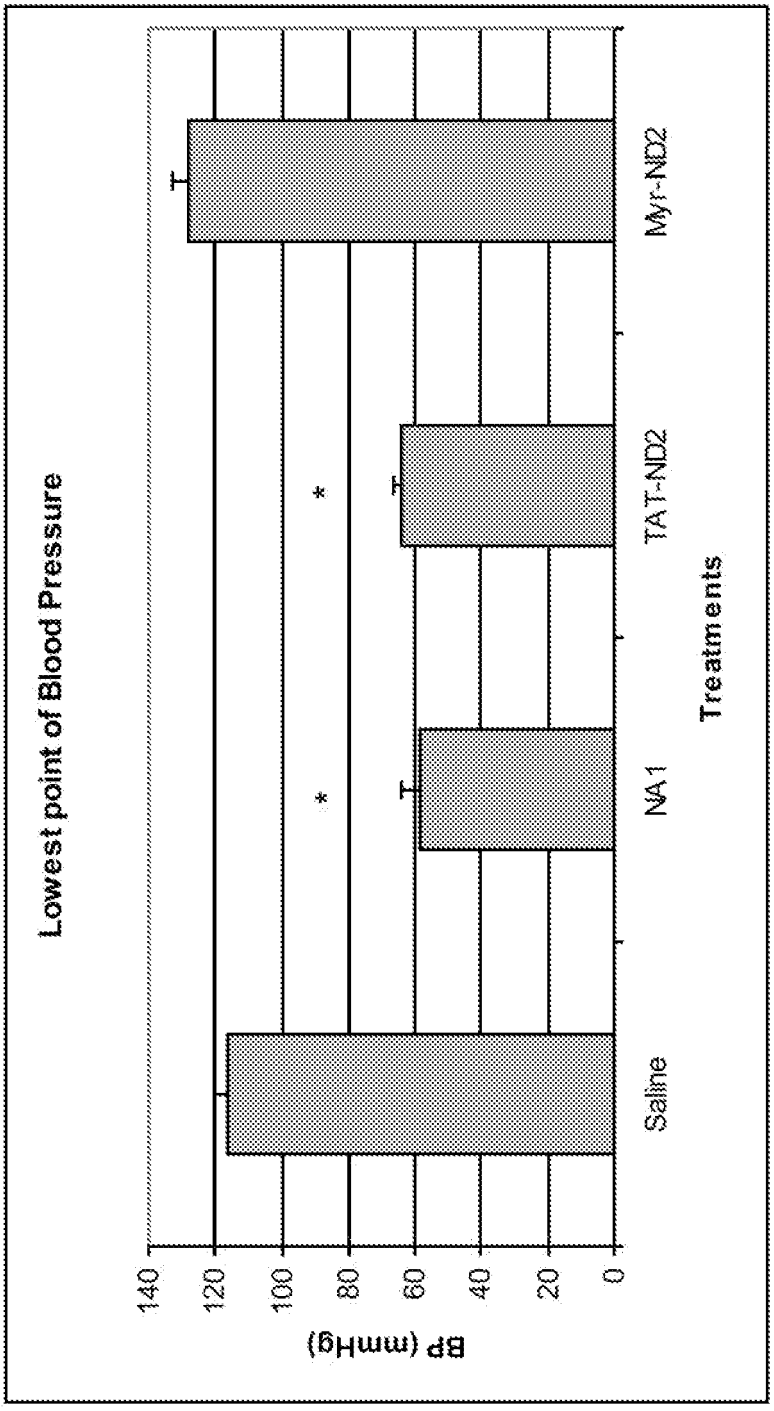

Lowest point of Blood Pressure
BP (mmHg)
140
120
100
80
60
40
20
0
Saline
NA 1
TAT-ND2
Myr-ND2
Treatments
*
*
N=5

Figure 21

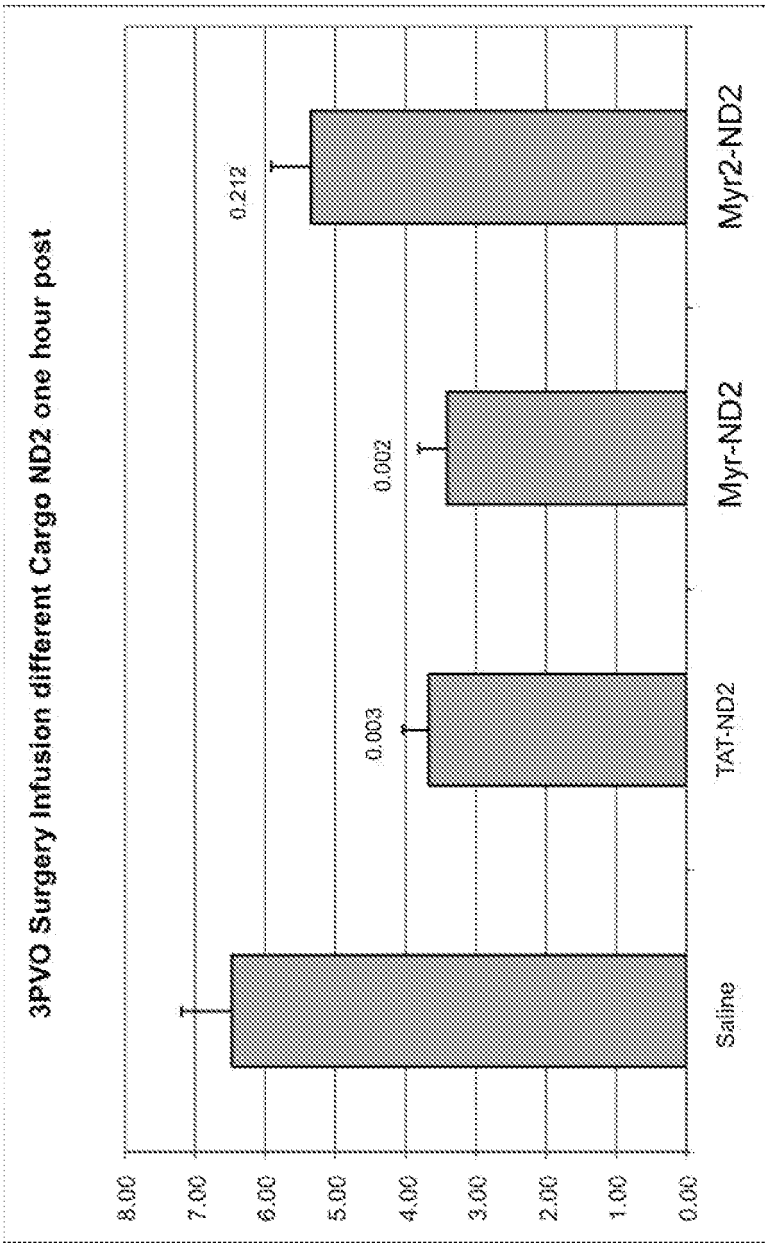

3PVO Surgery Infusion different Cargo ND2 one hour post
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0.212
0.002
0.003
Saline
TAT-ND2
Myr-ND2
Myr2-ND2

Figure 22

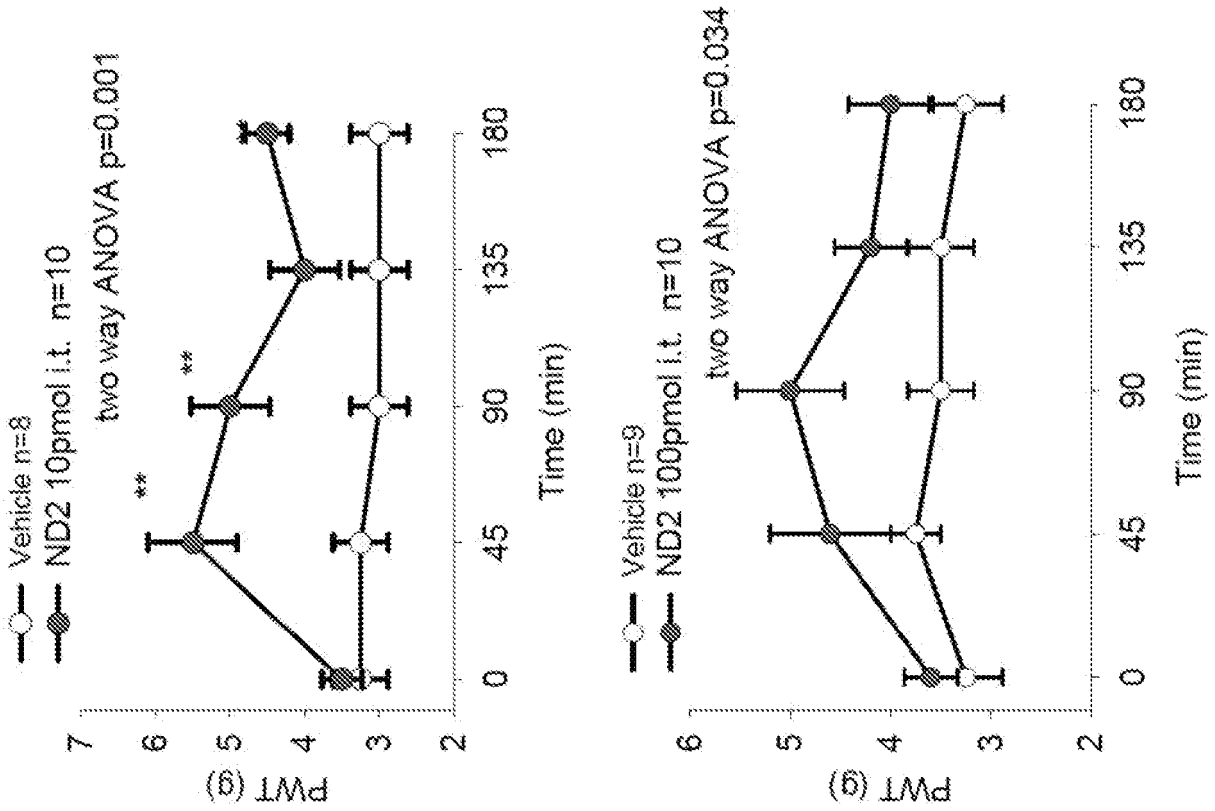

Vehicle n=8
ND2 10pmol i.t. n=10
two way ANOVA p=0.001
**
**
**
PWT (g)
Time (min)
0
45
90
135
180
2
3
4
5
6
7
Vehicle n=9
ND2 100pmol i.t. n=10
two way ANOVA p=0.034
PWT (g)
Time (min)

Figure 23