

Fig. 1C

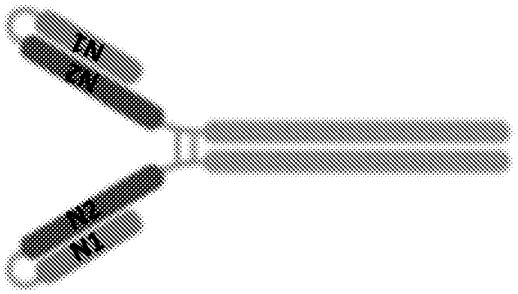


Fig. 1B

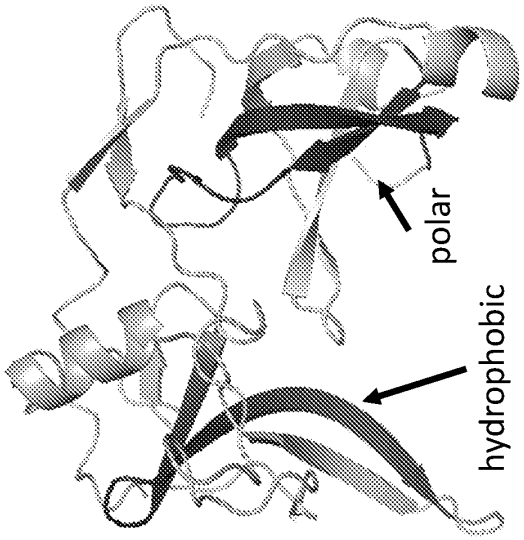


Fig. 1A

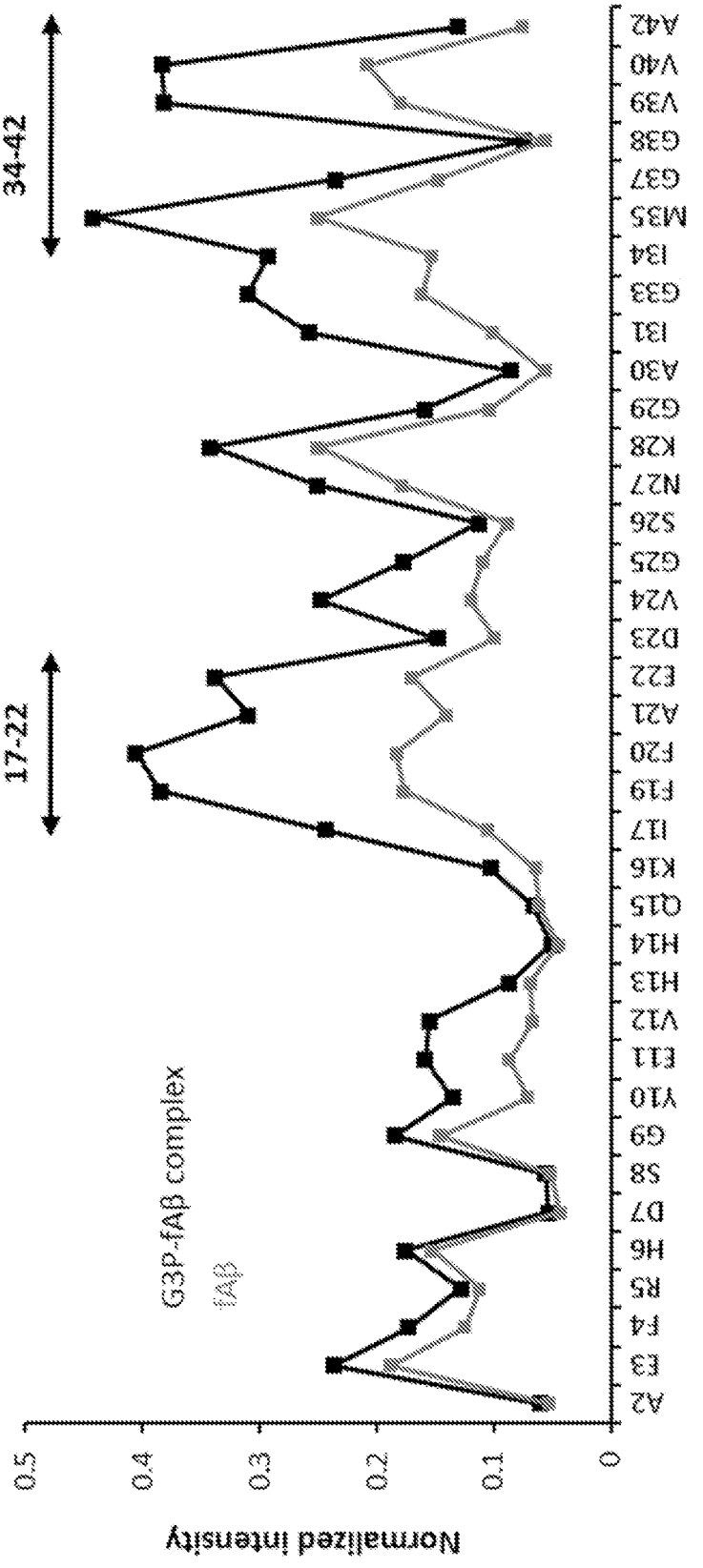

Normalized intensity
0.5
0.4
0.3
0.2
0.1
0
A2
E3
F4
R5
H6
D7
S8
G9
Y10
E11
V12
H13
H14
Q15
K16
I17
F19
F20
A21
E22
D23
V24
G25
S26
N27
K28
G29
A30
I31
G33
I34
M35
G37
G38
V39
V40
A42
17-22
34-42
G3P-fAβ complex
fAβ

Fig. 2

```
                10        20        30
                |         |         |
SEQ ID NO:1     AETVESCLAKPHTENSFTNVWKDDKTLDRYAN
SEQ ID NO:2     ATTDAECLSKPAFDGTLSNVWKEGDS--RYAN
```

Fig. 3A

Fig. 3B

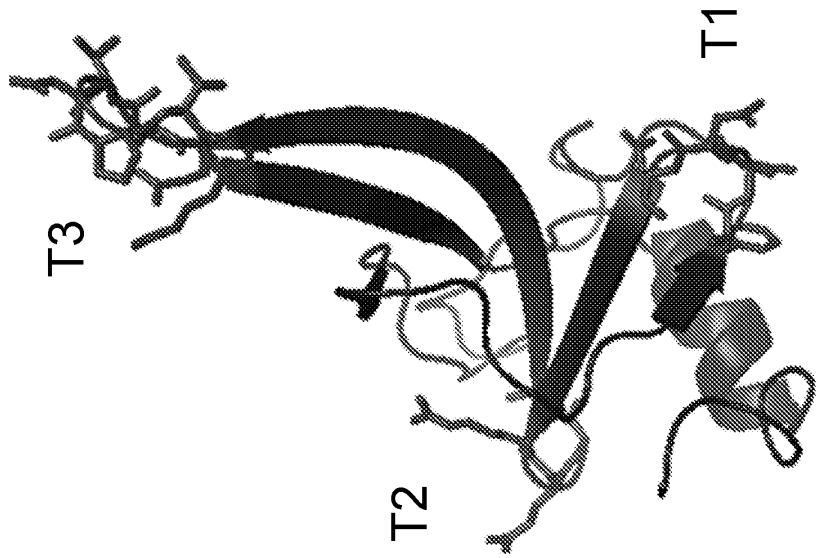


Fig. 3C

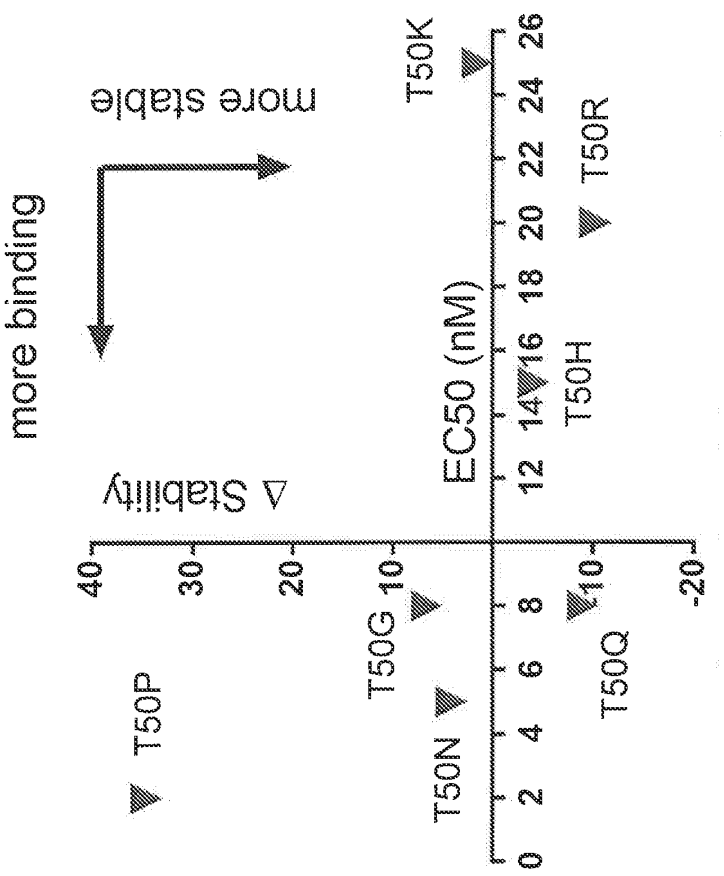

more binding
more stable
Δ Stability
EC50 (nM)
40
30
20
10
0
2
4
6
8
10
12
14
16
18
20
22
24
26
-20
T50P
T50G
T50N
T50Q
T50H
T50R
T50K

Fig. 3D

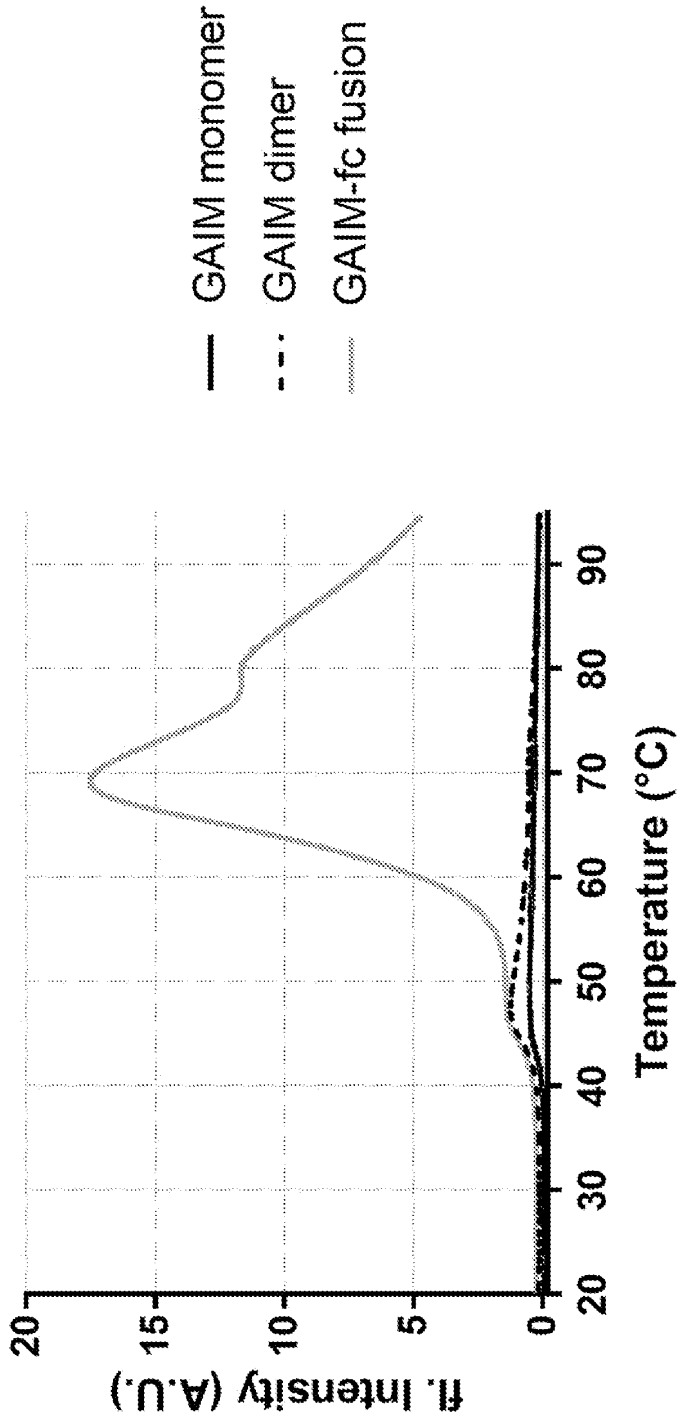
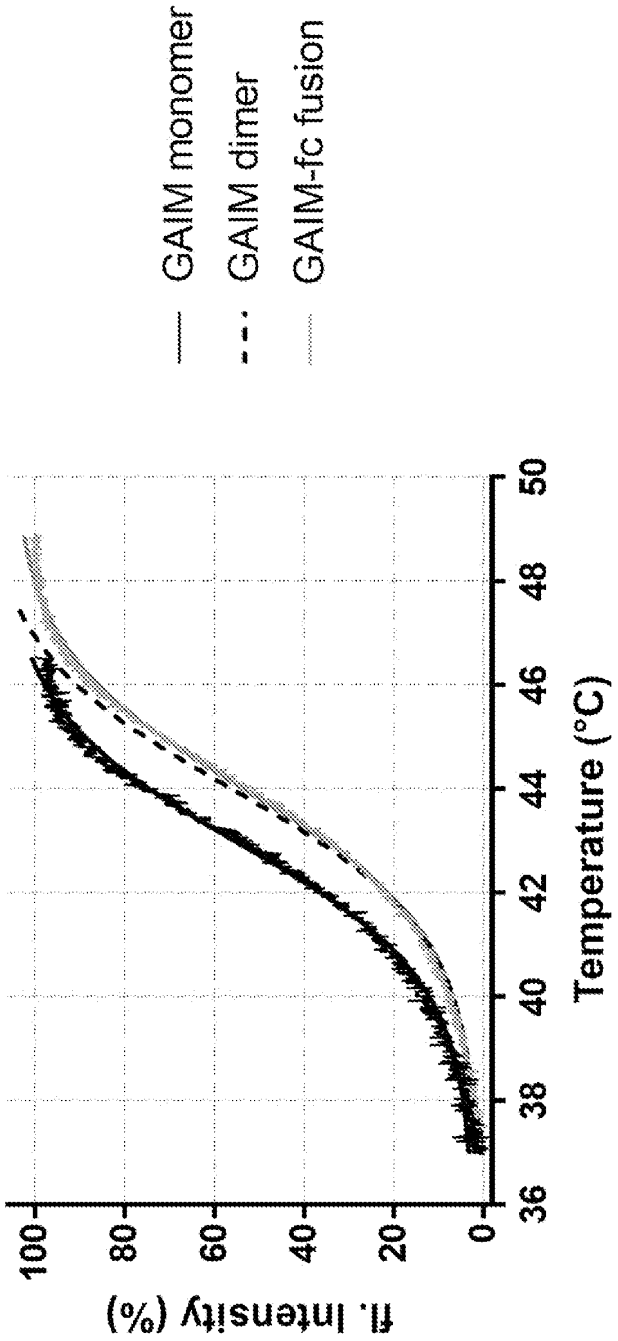

GAIM monomer
GAIM dimer
GAIM-fc fusion
fl. Intensity (A.U.)
0
5
10
15
20
Temperature (°C)
20
30
40
50
60
70
80
90

Fig. 4A



Sigmoidal, 4PL, Best-fit values			
	GAIM monomer	GAIM dimer	GAIM-fc fusion
T_m1 (°C)	42.95	44.02	43.98

Fig. 4B

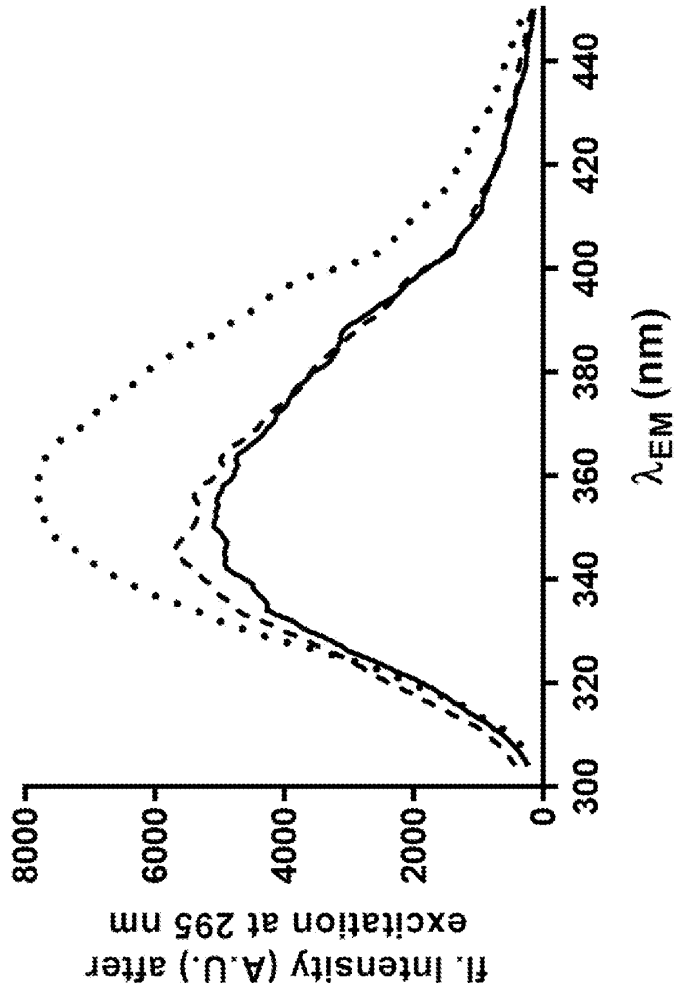

fl. Intensity (A.U.) after excitation at 295 nm
8000
6000
4000
2000
0
300
320
340
360
380
400
420
440
λEM (nm)

Fig. 5A

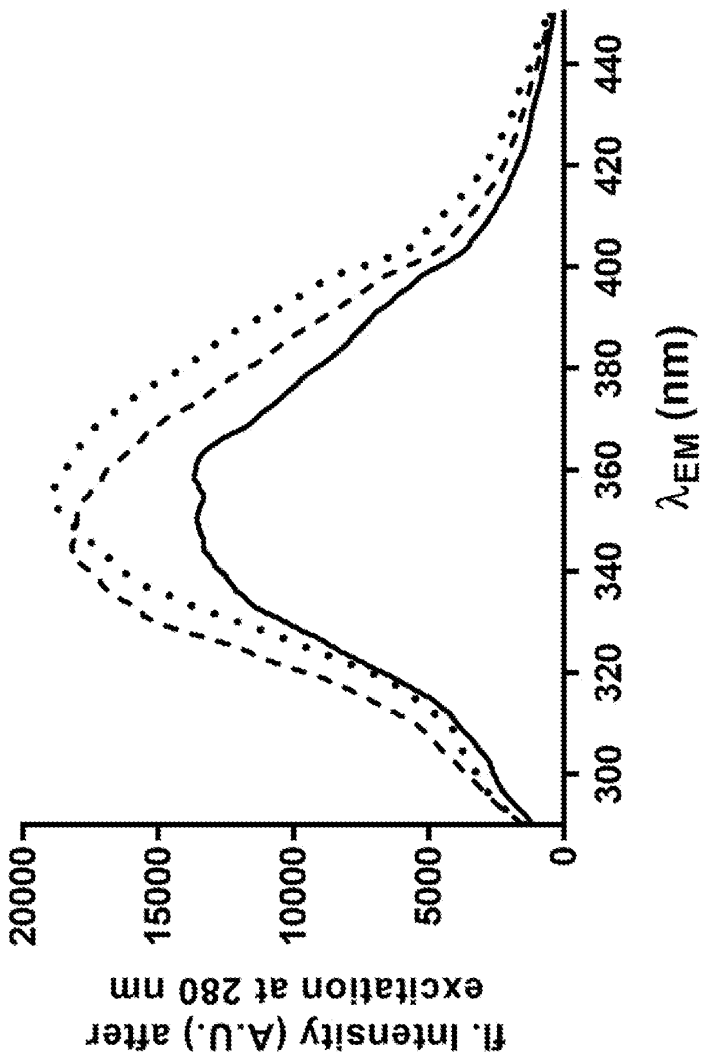

fl. Intensity (A.U.) after excitation at 280 nm
20000
15000
10000
5000
0
300
320
340
360
380
400
420
440
λ_{EM} (nm)

Fig. 5B

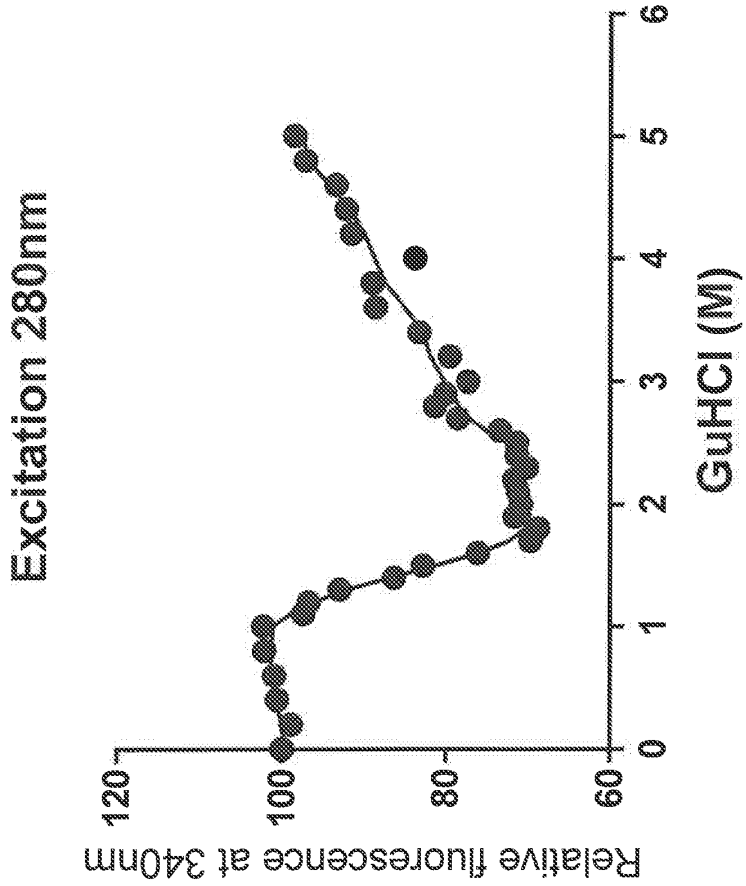

Excitation 280nm
Relative fluorescence at 340nm
120
100
80
60
0
1
2
3
4
5
6
GuHCl (M)

Fig. 5C

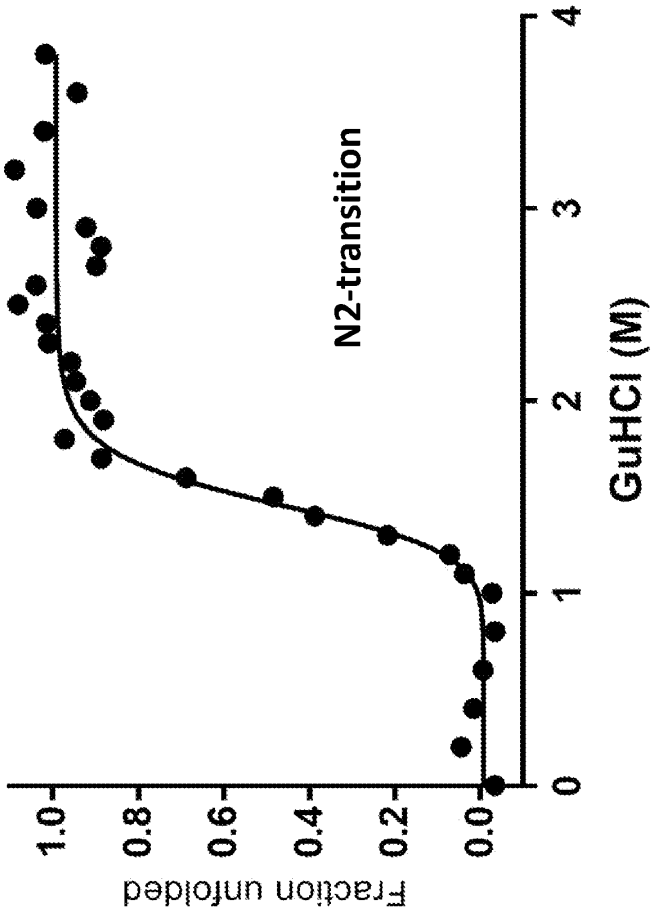

Fraction unfolded
1.0
0.8
0.6
0.4
0.2
0.0
0
1
2
3
4
GuHCl (M)
N2-transition

Fig. 5D

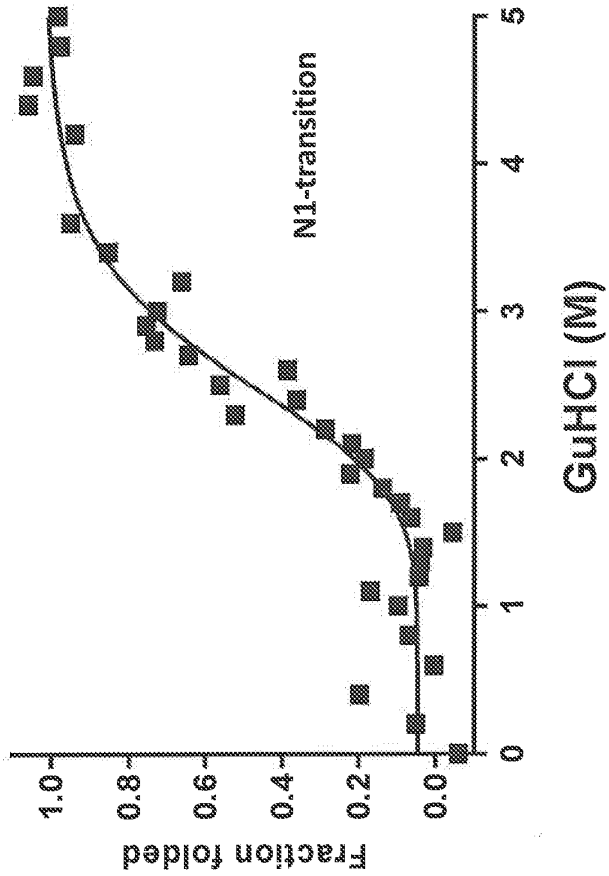

N1-transition
Fraction folded
1.0
0.8
0.6
0.4
0.2
0.0
0
1
2
3
4
5
GuHCl (M)

Fig. 5E

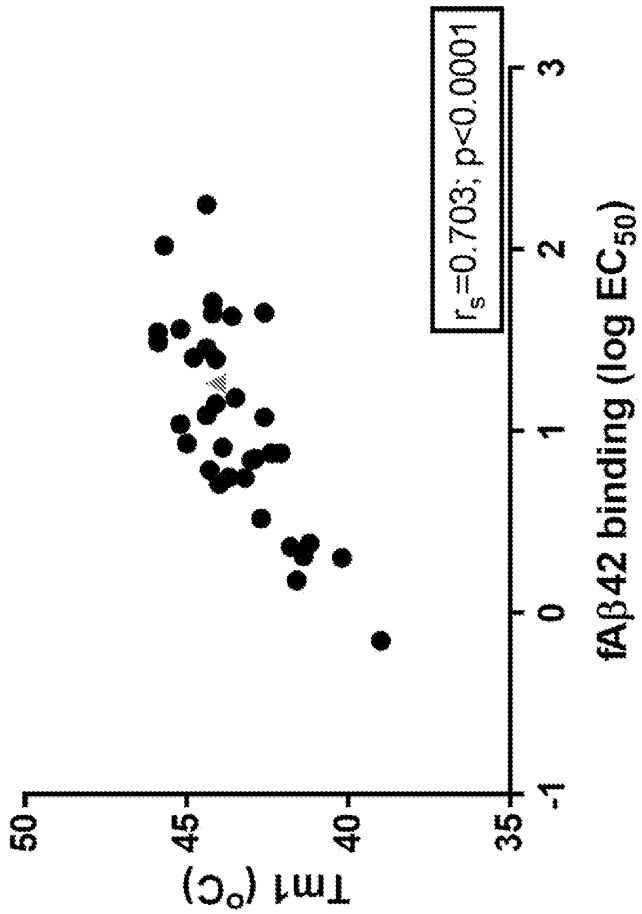


Fig. 6A

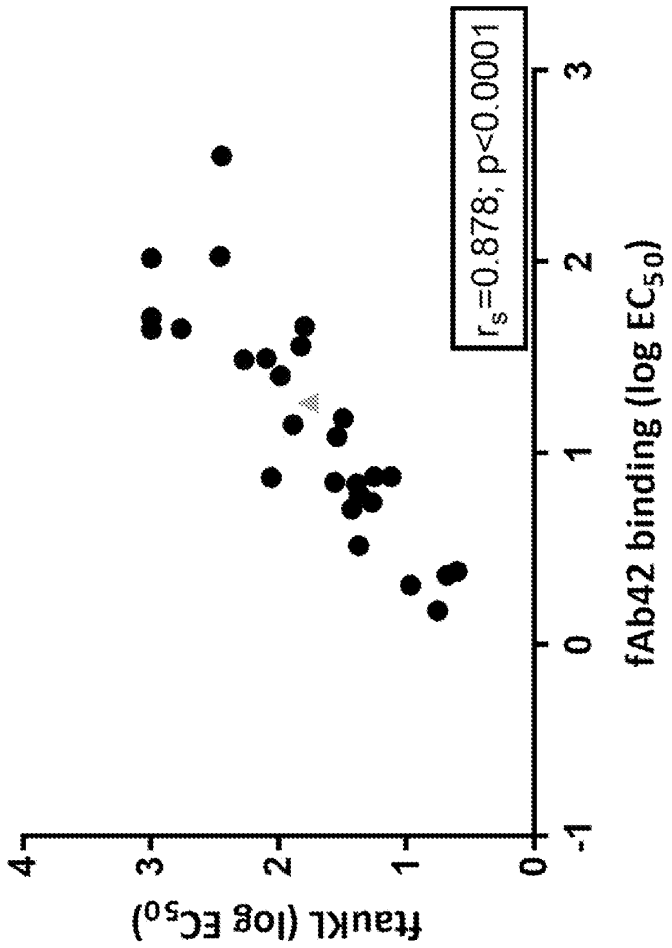

ftauKL (log EC50)
fAb42 binding (log EC50)
rs=0.878; p<0.0001
4
3
2
1
0
-1
0
1
2
3

Fig. 6B

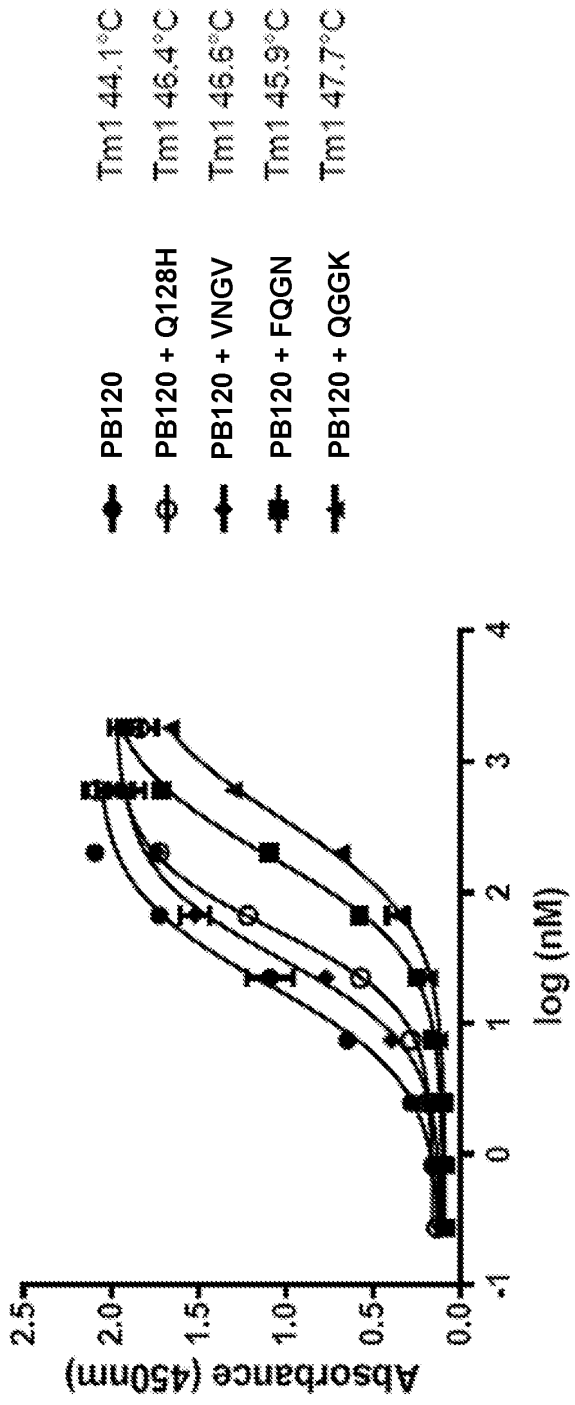

Tm1 44.1°C
Tm1 46.4°C
Tm1 46.6°C
Tm1 45.9°C
Tm1 47.7°C
PB120
PB120 + Q128H
PB120 + VNGV
PB120 + FQGN
PB120 + QGGK
Absorbance (450nm)
2.5
2.0
1.5
1.0
0.5
0.0
-1
0
1
2
3
4
log (nM)

Fig. 7A

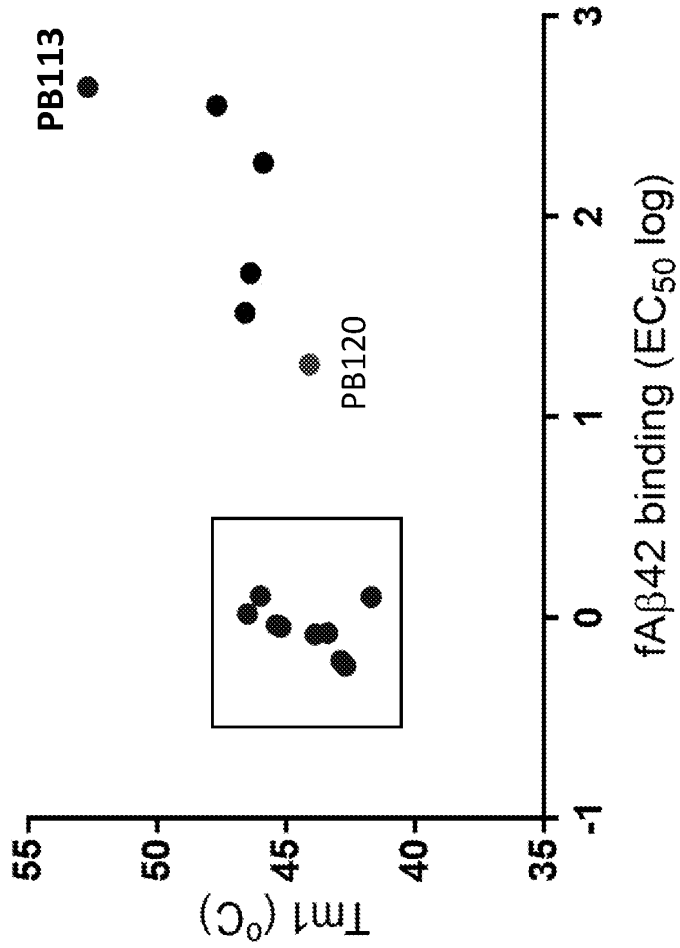


Fig. 7B

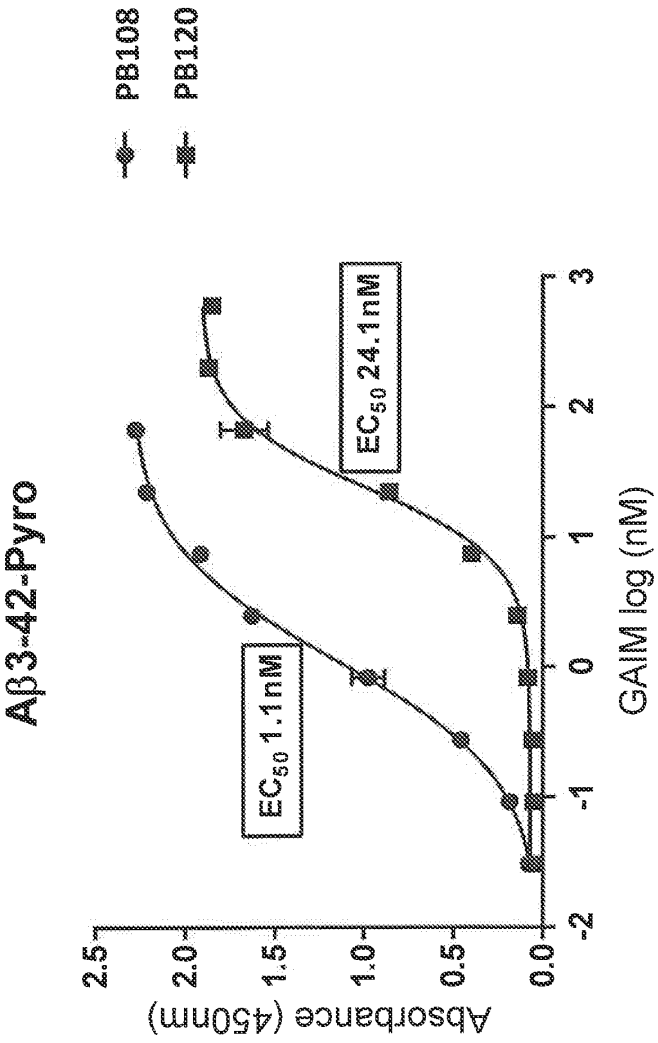

Aβ3-42-Pyro
PB108
PB120
EC50 1.1nM
EC50 24.1nM
Absorbance (450nm)
GAIM log (nM)
2.5
2.0
1.5
1.0
0.5
0.0
-2
-1
0
1
2
3

Fig. 8A

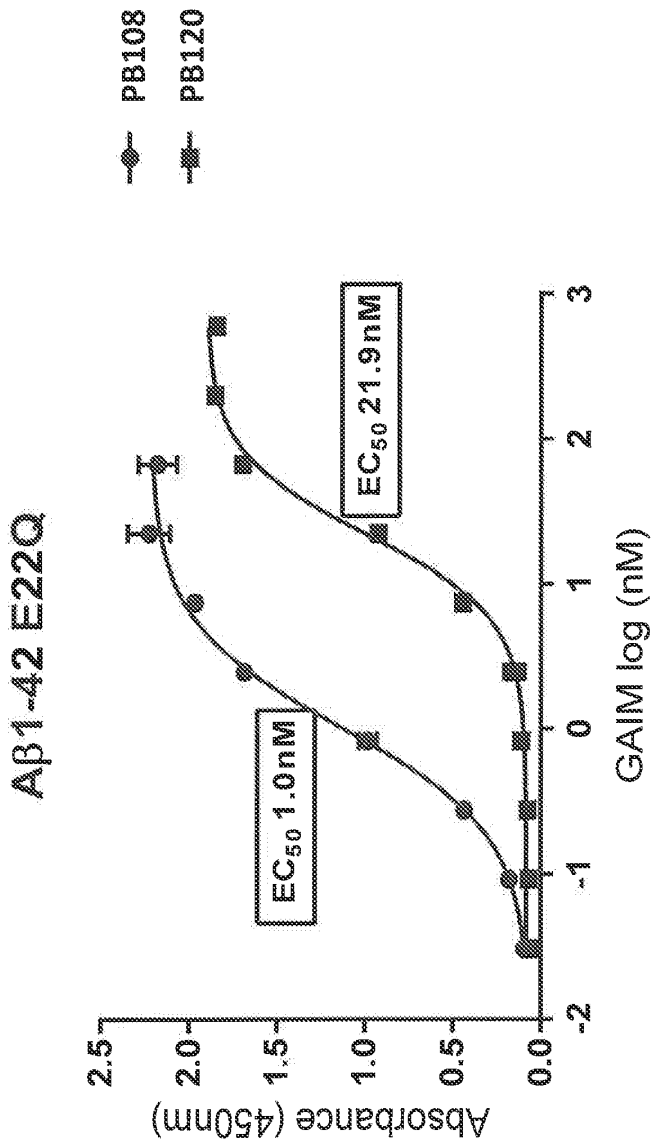

PB108
PB120
Aβ1-42 E22Q
EC50 1.0nM
EC50 21.9nM
Absorbance (450nm)
GAIM log (nM)
2.5
2.0
1.5
1.0
0.5
0.0
-2
-1
0
1
2
3

Fig. 8B

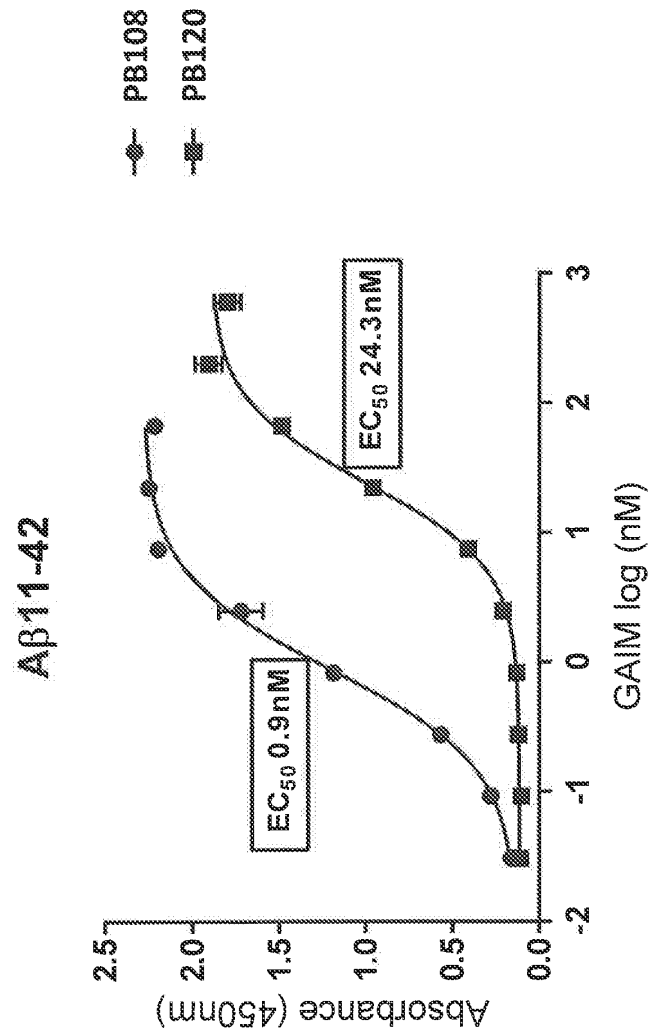

PB108
PB120
Aβ11-42
EC50 0.9nM
EC50 24.3nM
Absorbance (450nm)
GAIM log (nM)
2.5
2.0
1.5
1.0
0.5
0.0
-2
-1
0
1
2
3

Fig. 8C

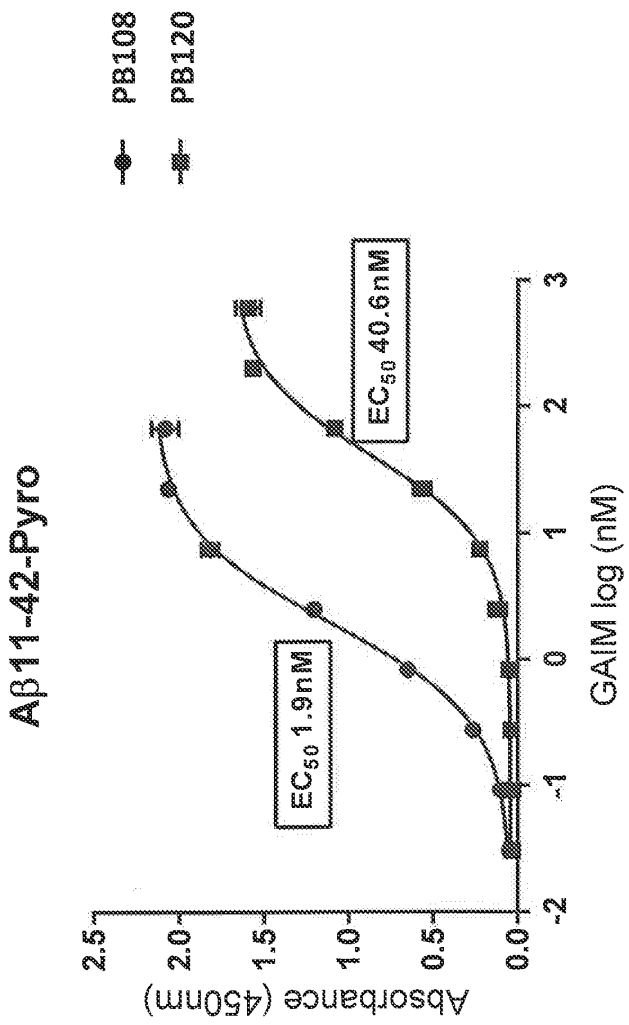

Aβ11-42-Pyro
PB108
PB120
EC50 1.9nM
EC50 40.6nM
Absorbance (450nm)
GAIM log (nM)
2.5
2.0
1.5
1.0
0.5
0.0
-2
-1
0
1
2
3

Fig. 8D

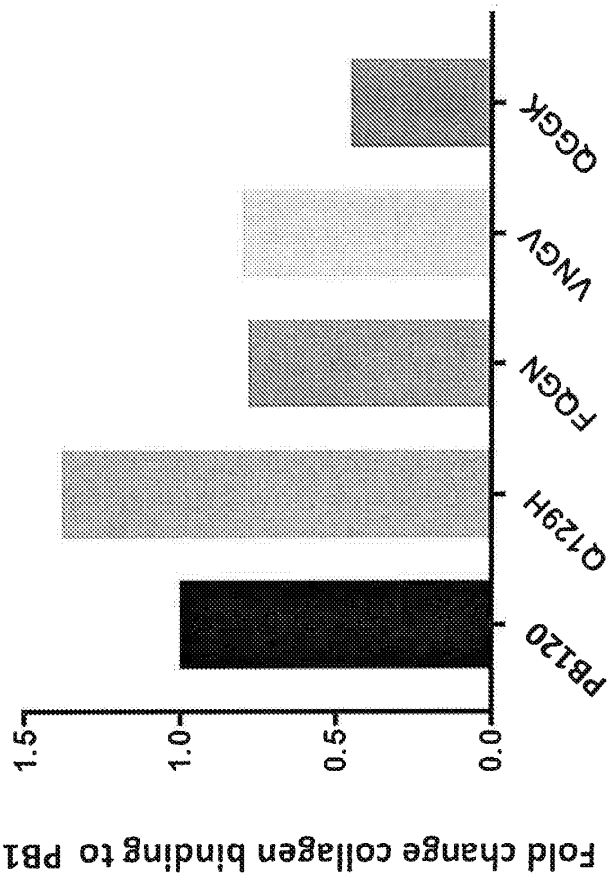

Fold change collagen binding to PB120
1.5
1.0
0.5
0.0
PB120
Q129H
FQGN
VNGV
QGGK

Fig. 9

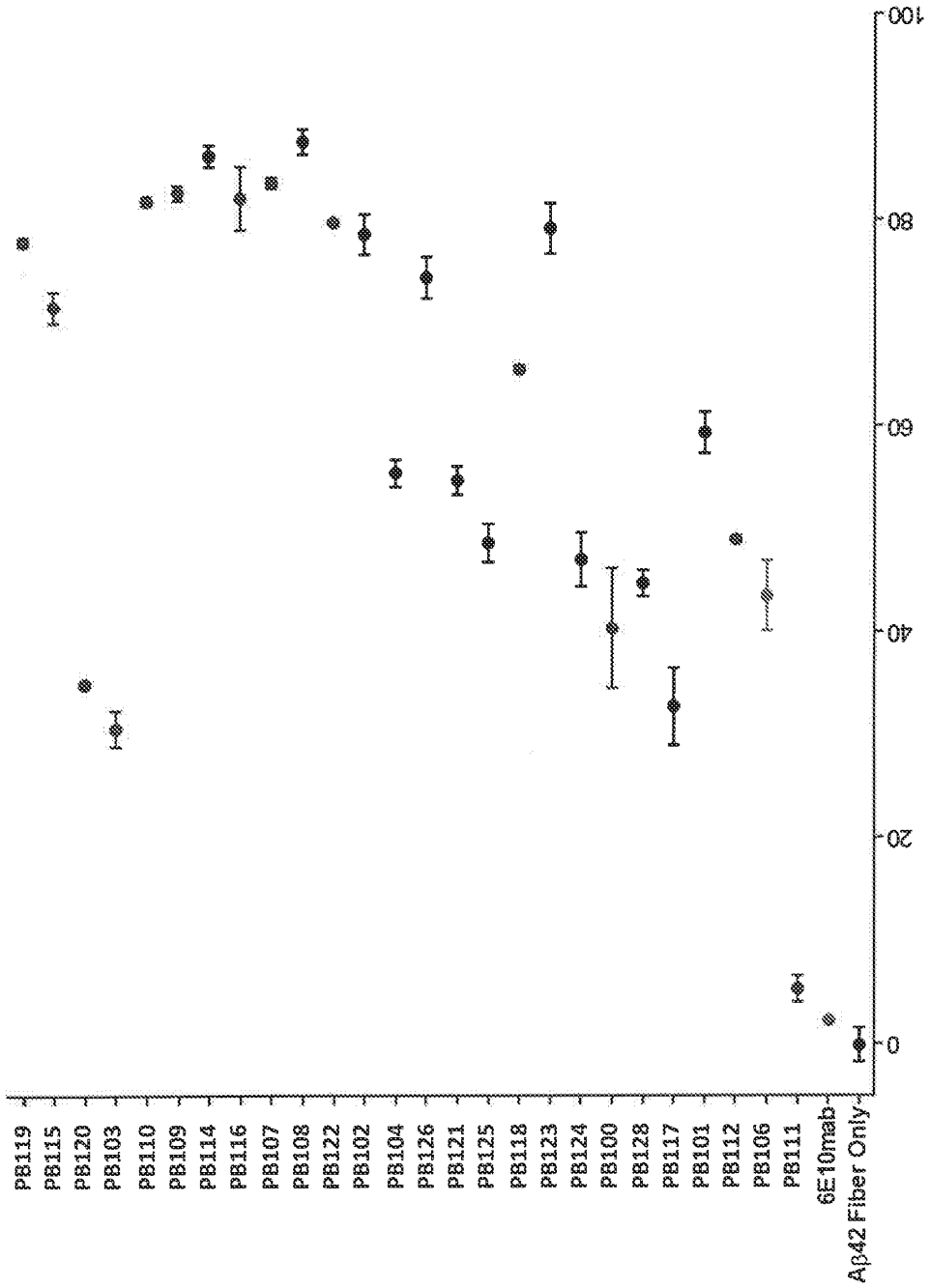

% Remodeling
0
20
40
60
80
100
Aβ42 Fiber Only
6E10mab
PB111
PB106
PB112
PB101
PB117
PB128
PB100
PB124
PB123
PB118
PB125
PB121
PB126
PB104
PB102
PB122
PB108
PB107
PB116
PB114
PB109
PB110
PB103
PB120
PB115
PB119

Fig. 10A

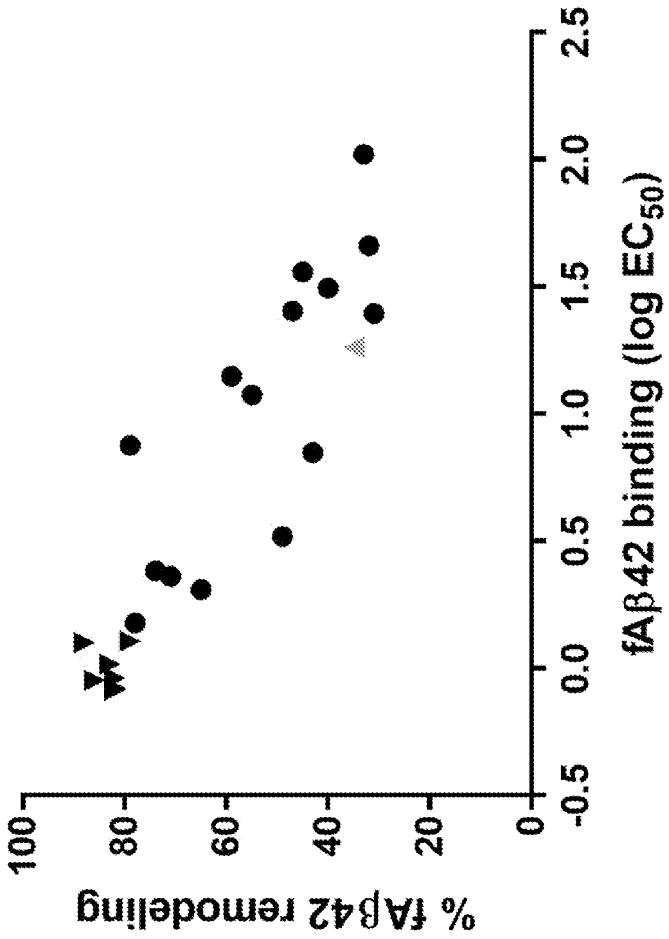

% fAβ42 remodeling
100
80
60
40
20
0
-0.5
0.0
0.5
1.0
1.5
2.0
2.5
fAβ42 binding (log EC50)

Fig. 10B

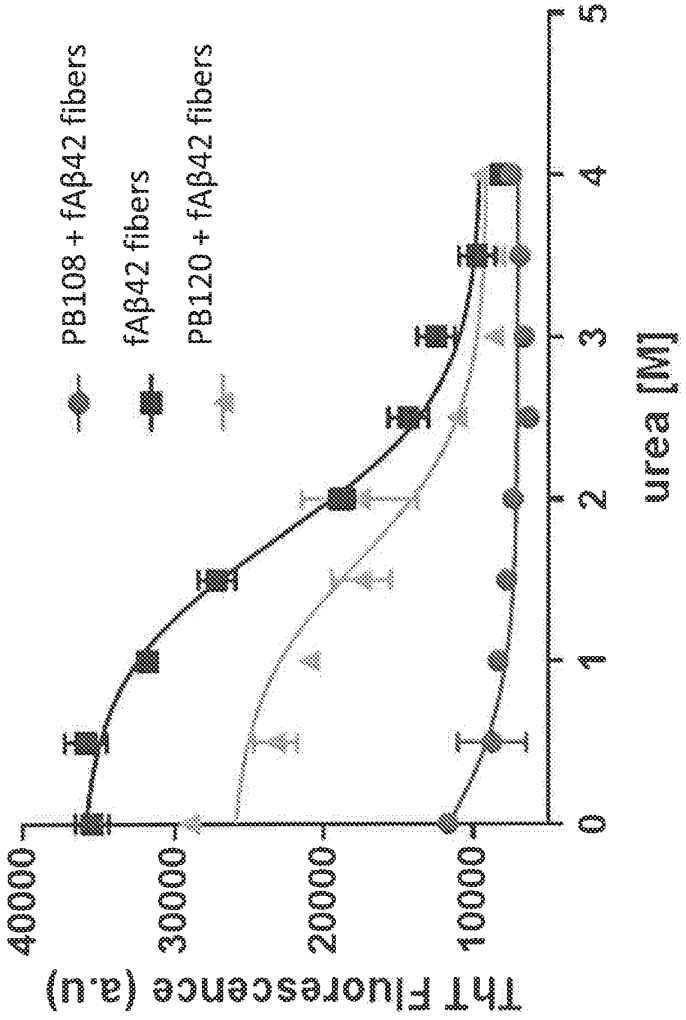

PB108 + fAβ42 fibers
fAβ42 fibers
PB120 + fAβ42 fibers
ThT Fluorescence (a.u)
40000
30000
20000
10000
0
1
2
3
4
5
urea [M]

Fig. 10C

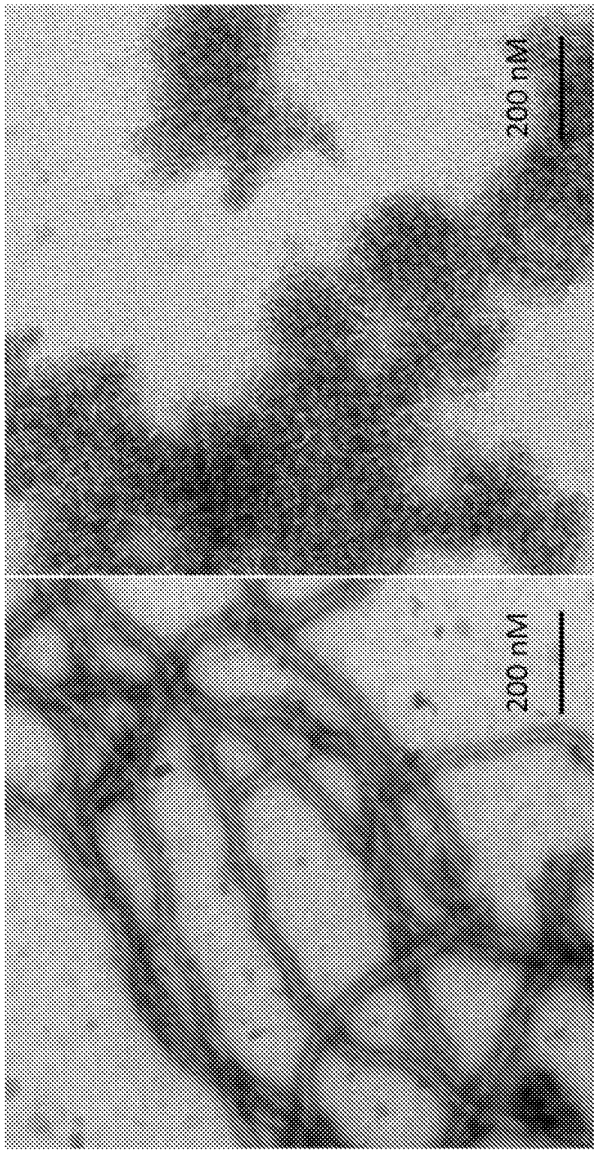


Fig. 10D

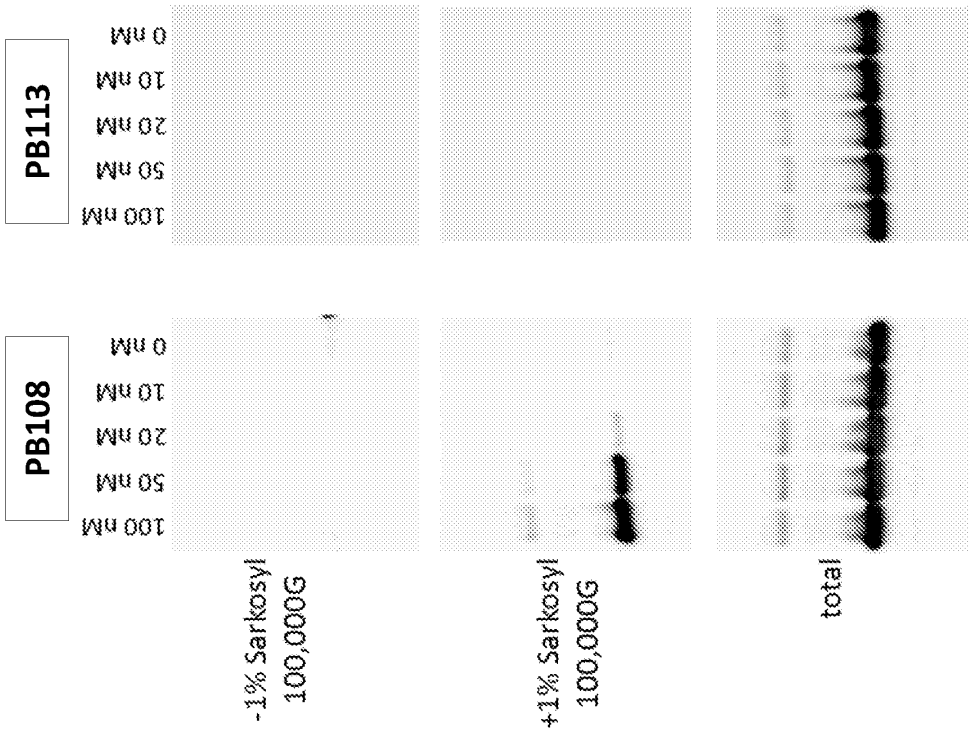

PB113
PB108
0 nM
10 nM
20 nM
50 nM
100 nM
-1% Sarkosyl
100,000G
+1% Sarkosyl
100,000G
total

Fig. 11A

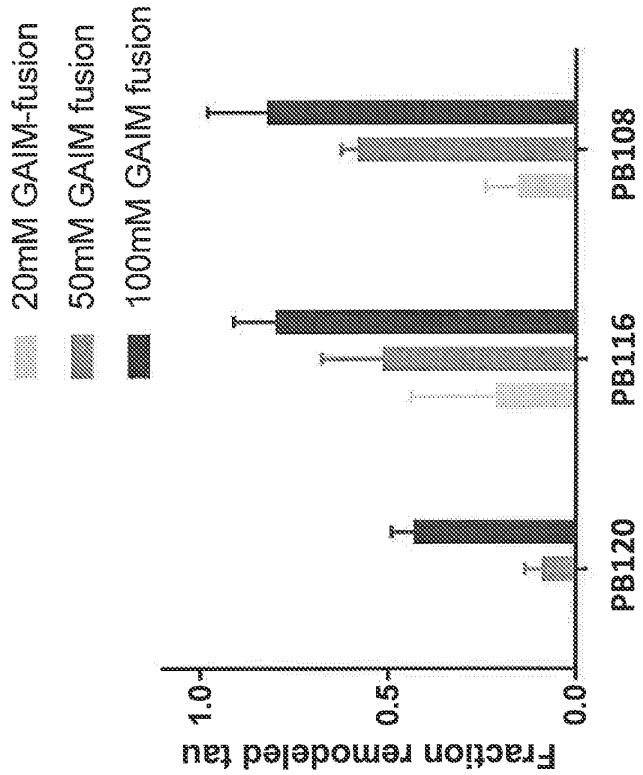

20mM GAIM-fusion
50mM GAIM fusion
100mM GAIM fusion
Fraction remodeled tau
1.0
0.5
0.0
PB120
PB116
PB108

Fig. 11B

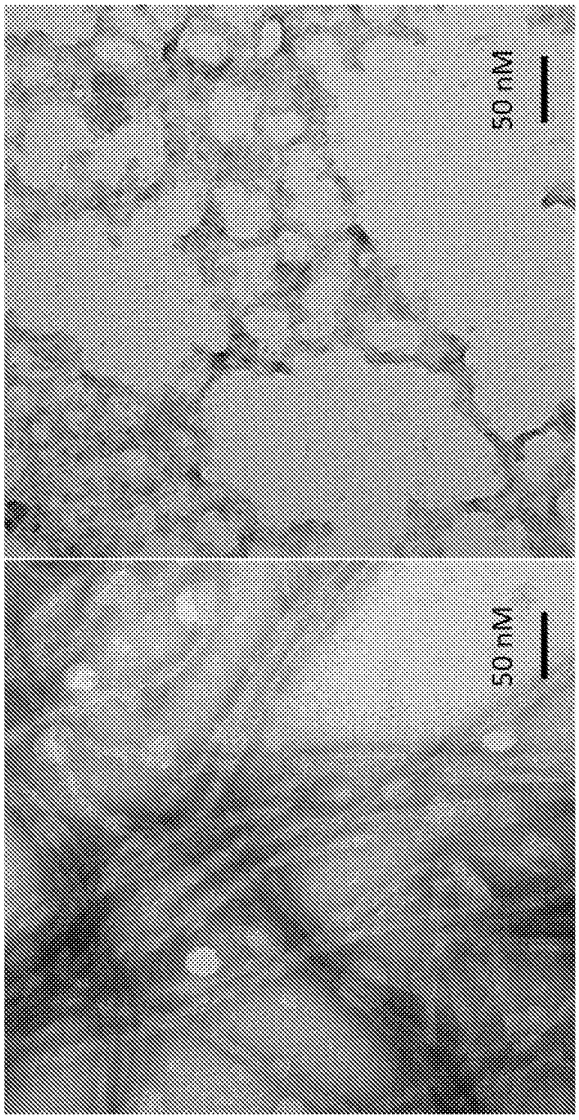


Fig. 11C

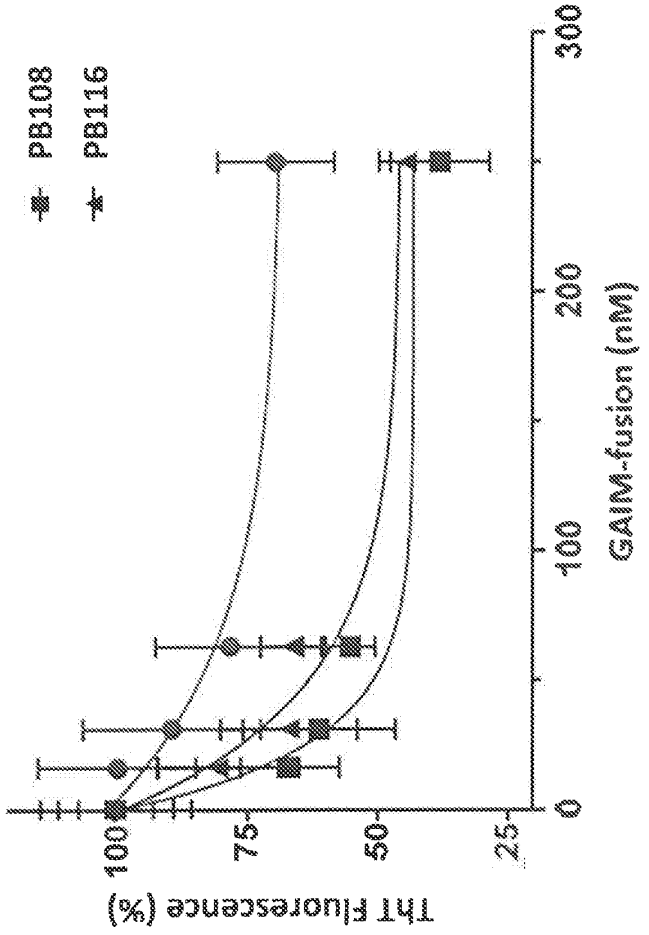

PB120
PB108
PB116
ThT fluorescence (%)
100
75
50
25
0
100
200
300
GAIM-fusion (nM)

Fig. 12A

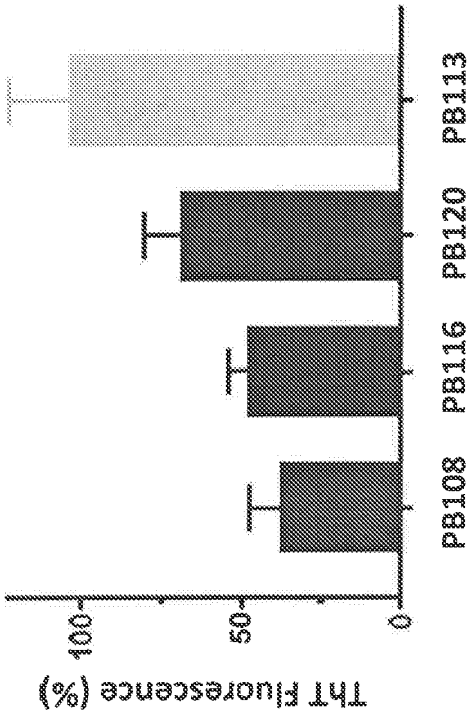


Fig. 12B

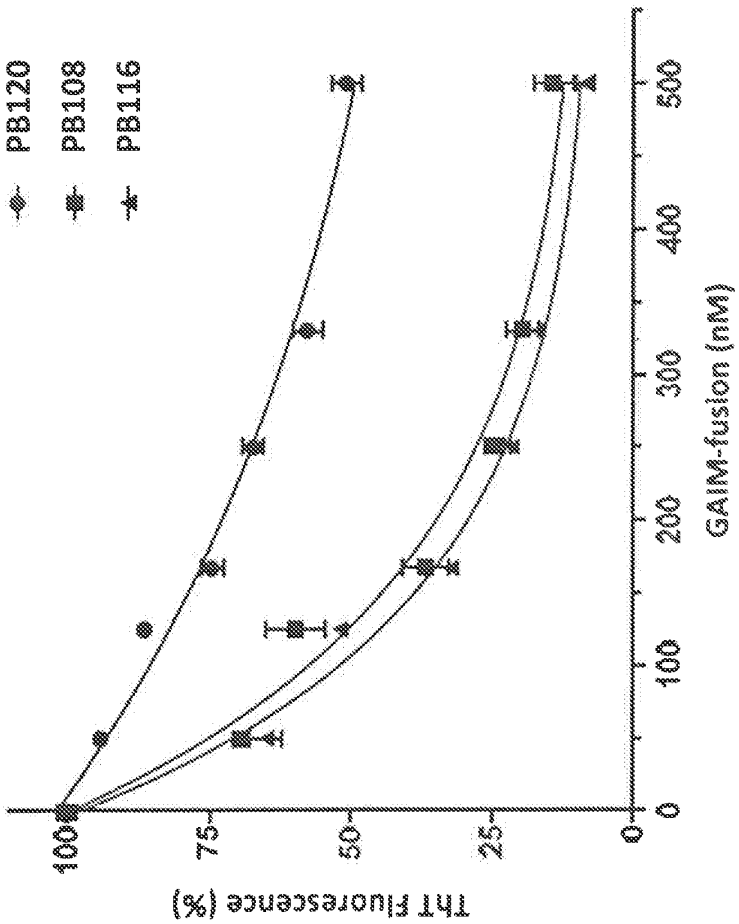

PB120
PB108
PB116
ThT fluorescence (%)
100
75
50
25
0
0
100
200
300
400
500
GAIM-fusion (nM)

Fig. 12C

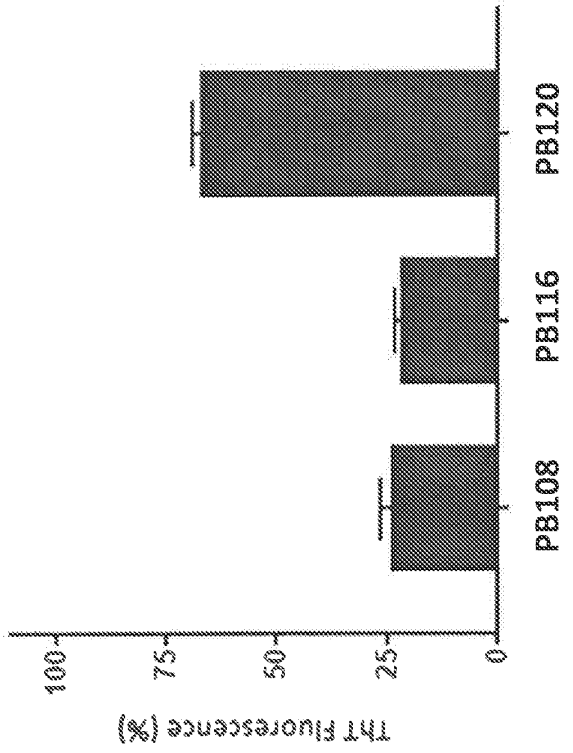


Fig. 12D