FIG. 1

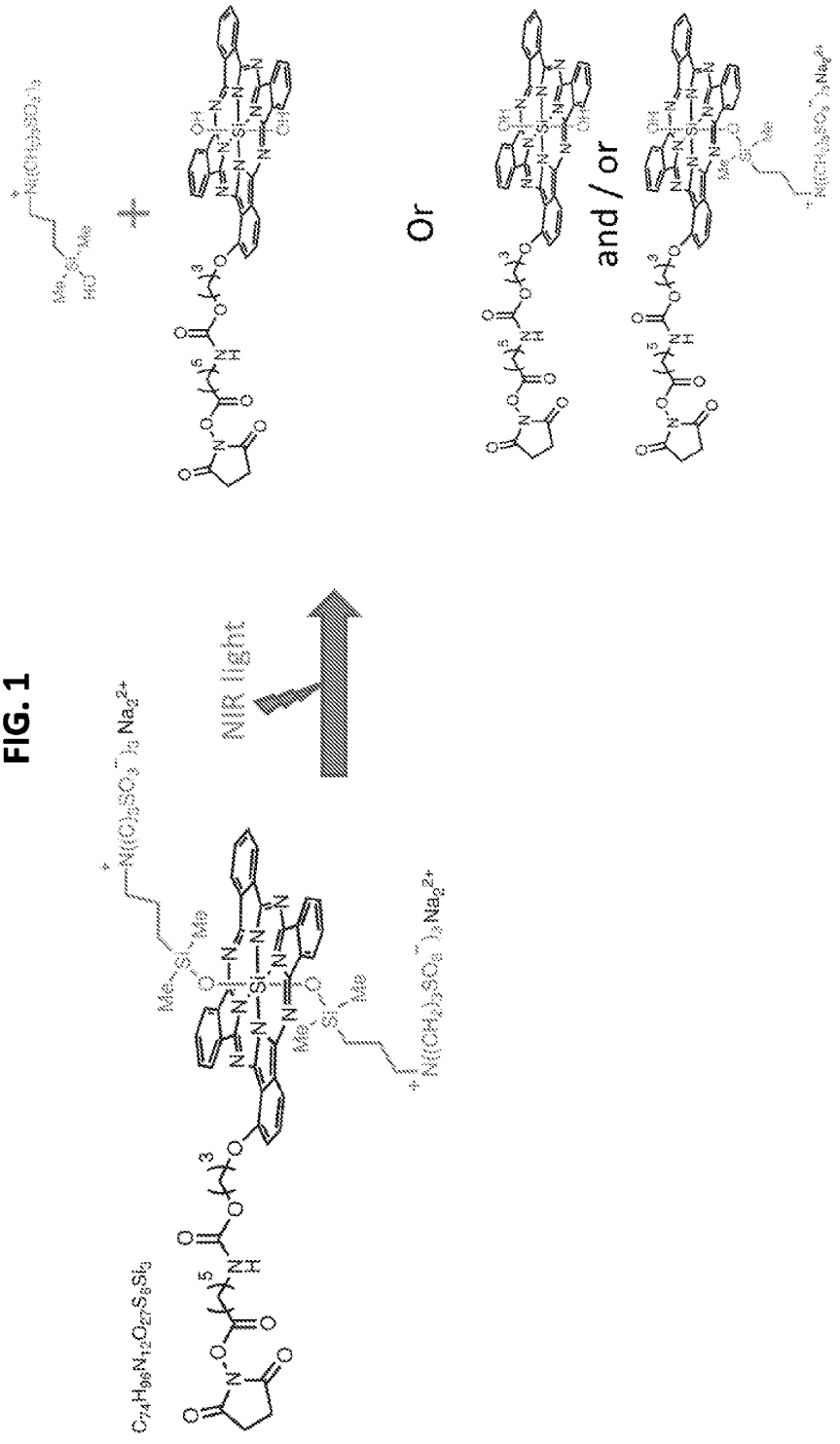


FIG. 2

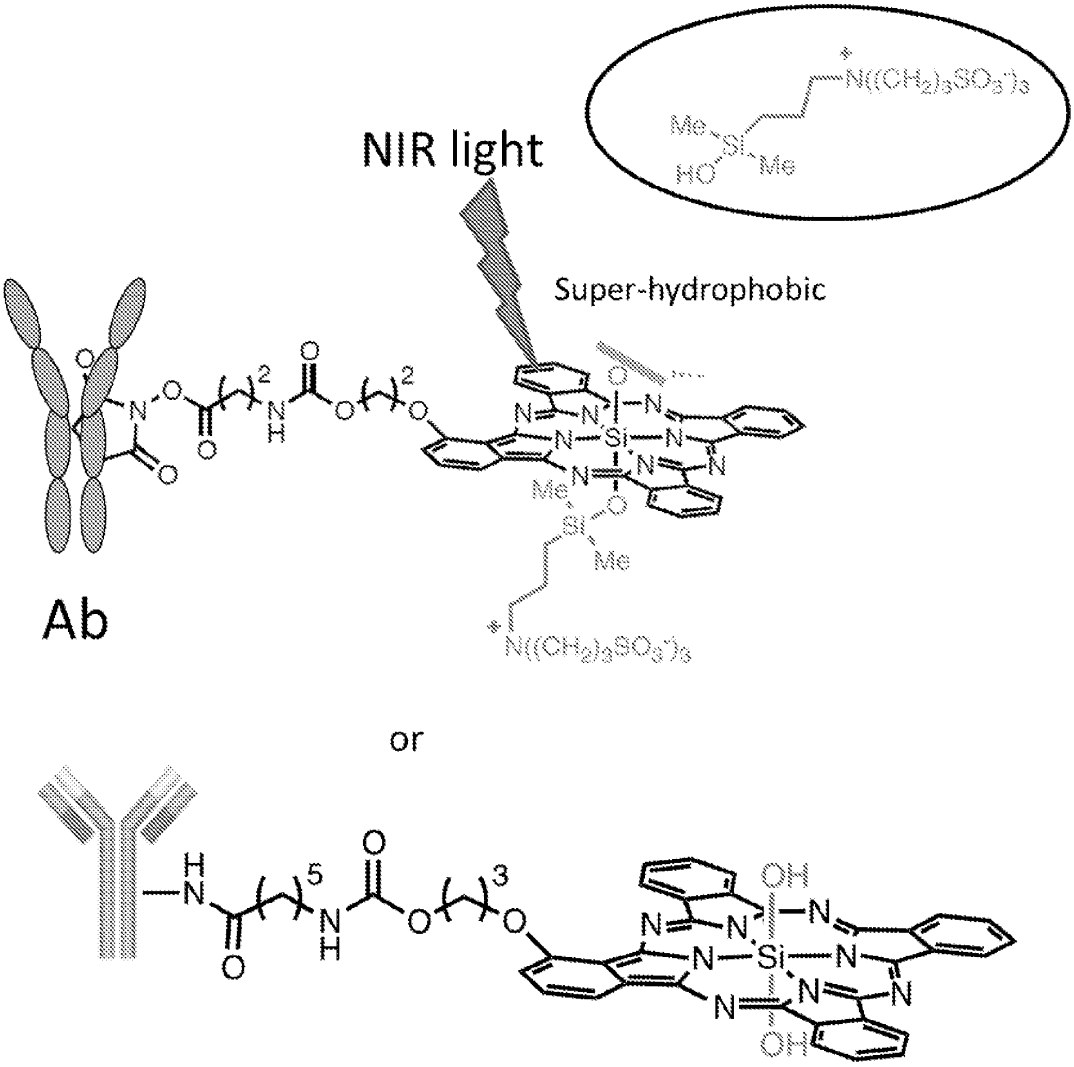


FIG. 3

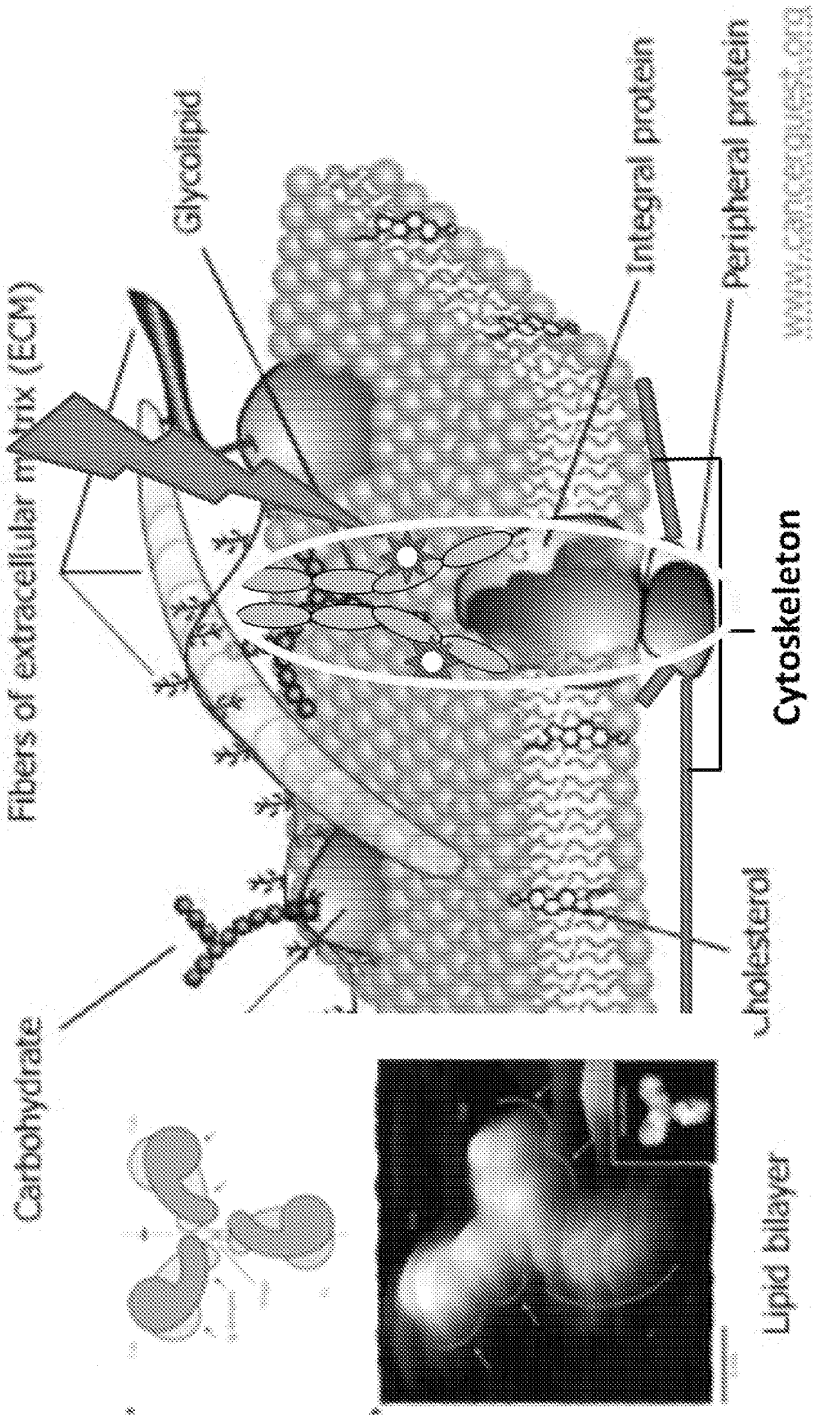

Glycolipid
Integral protein
Peripheral protein
Fibers of extracellular matrix (ECM)
Cytoskeleton
Cholesterol
Carbohydrate
Lipid bilayer

FIG. 4

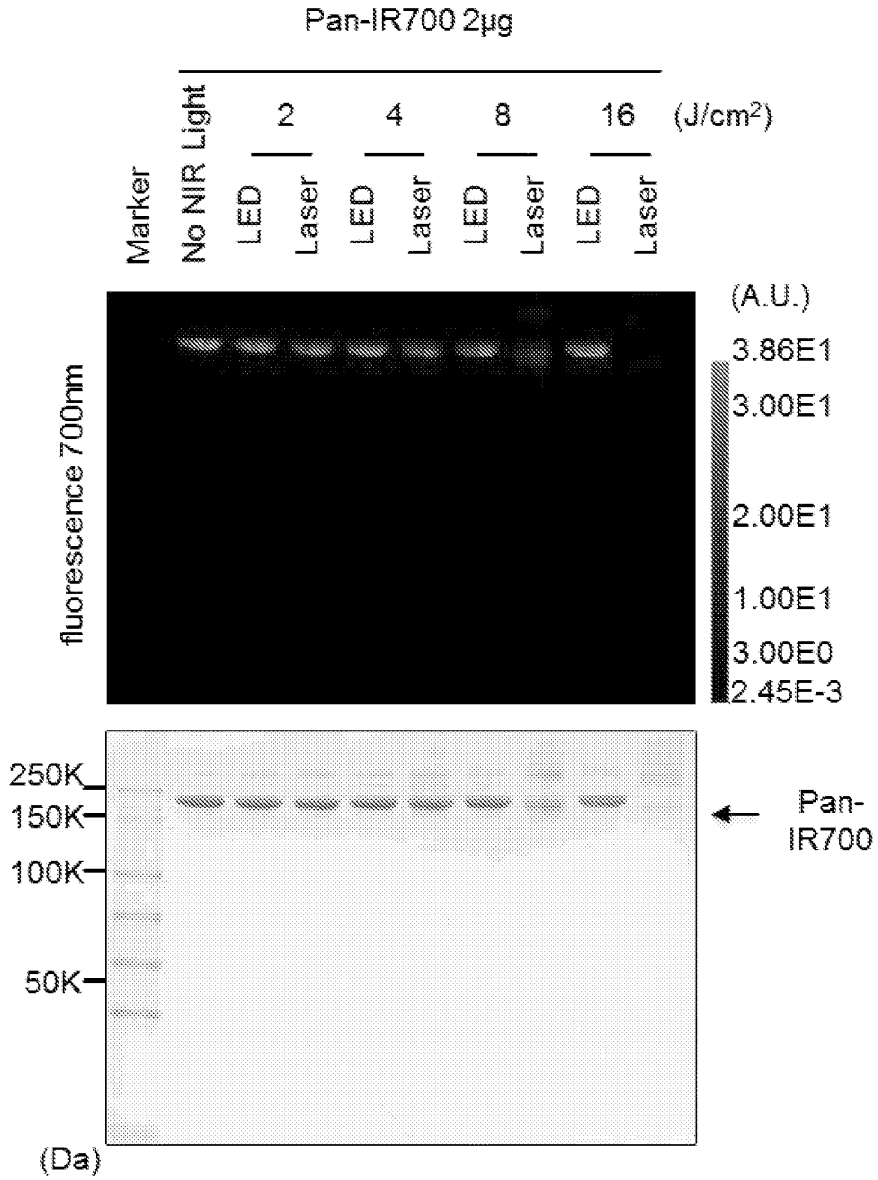

Pan-IR700 2μg
Marker
No NIR Light
2
4
8
16
(J/cm2)
LED
Laser
LED
Laser
LED
Laser
LED
Laser
fluorescence 700nm
(A.U.)
3.86E1
3.00E1
2.00E1
1.00E1
3.00E0
2.45E-3
250K
150K
100K
50K
(Da)
Pan-IR700

FIG. 5

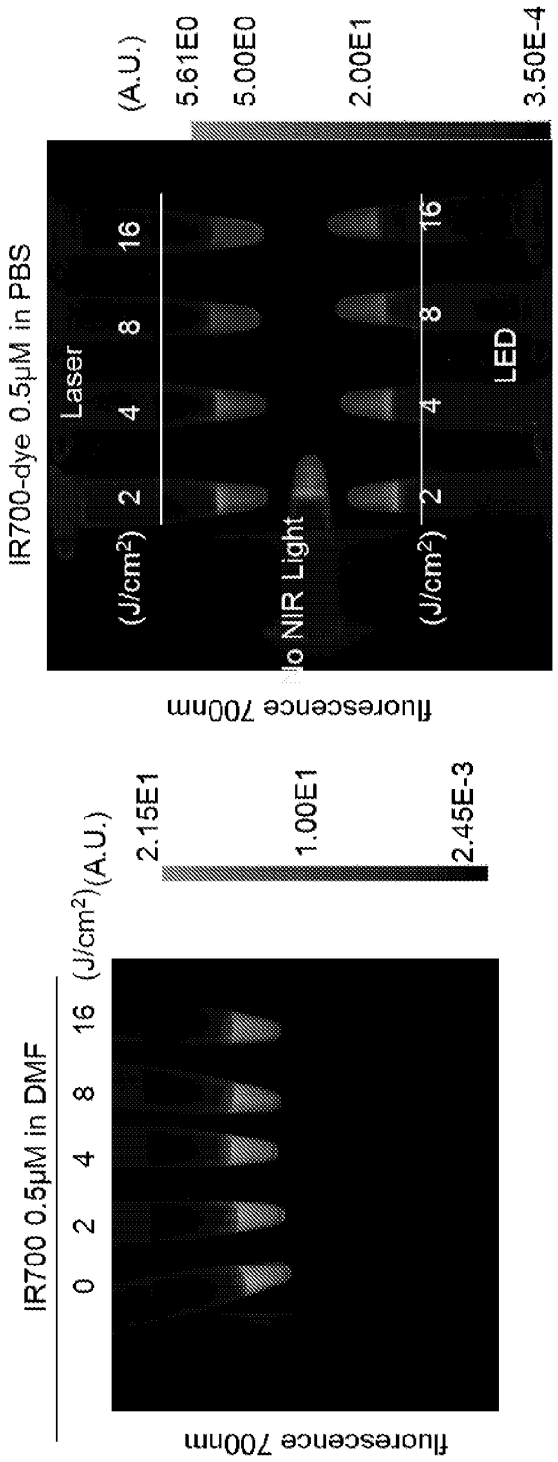

IR700-dye 0.5μM in PBS
Laser
(J/cm²) 2 4 8 16
No NIR Light
(J/cm²) 2 4 8 16
LED
(A.U.)
5.61E0
5.00E0
2.00E1
3.50E-4
Fluorescence 700nm
IR700 0.5μM in DMF
0 2 4 8 16 (J/cm²)
2.15E1
1.00E1
2.45E-3
(A.U.)
Fluorescence 700nm

FIG. 6

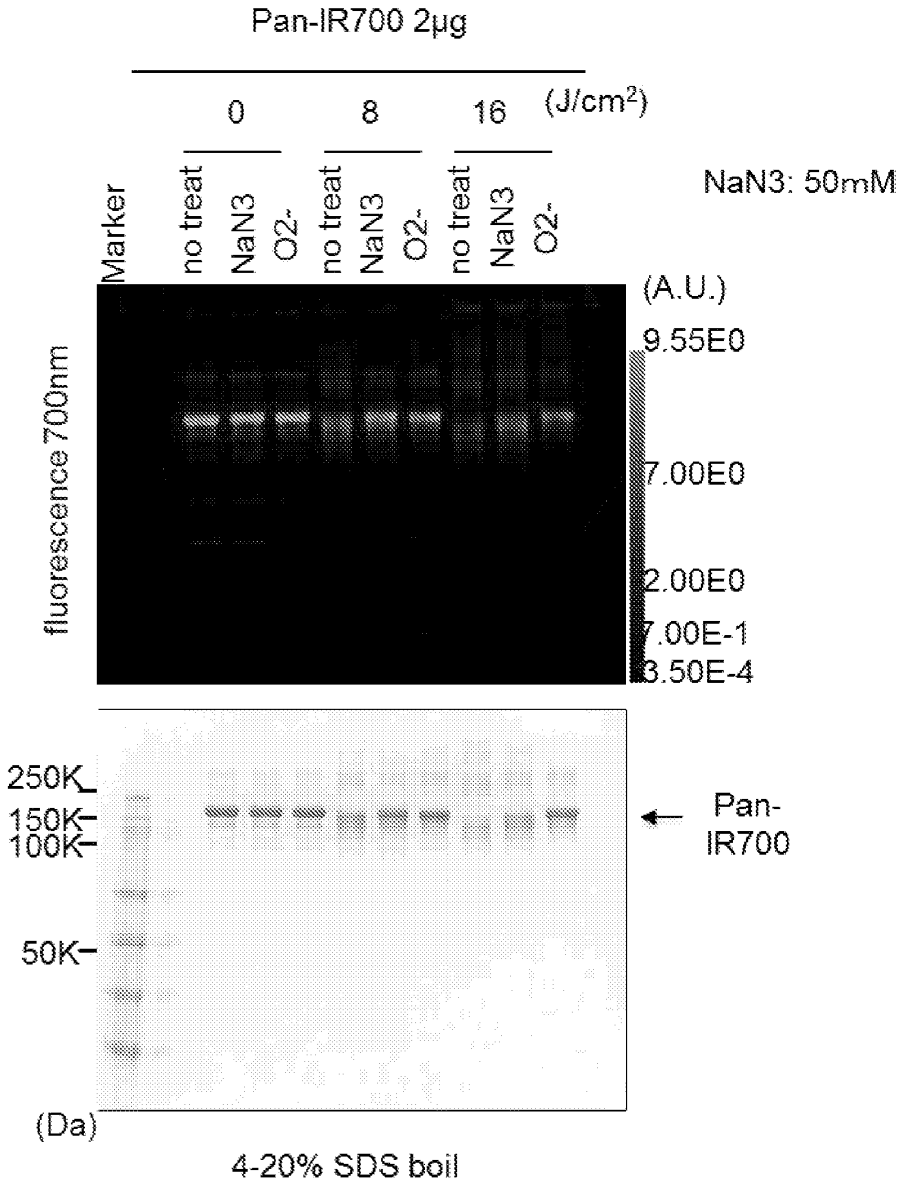

Pan-IR700 2μg
0
8
16
(J/cm2)
NaN3: 50mM
Marker
no treat
NaN3
O2-
no treat
NaN3
O2-
no treat
NaN3
O2-
(A.U.)
9.55E0
7.00E0
2.00E0
7.00E-1
3.50E-4
fluorescence 700nm
250K
150K
100K
50K
(Da)
Pan-IR700
4-20% SDS boil

FIG. 7

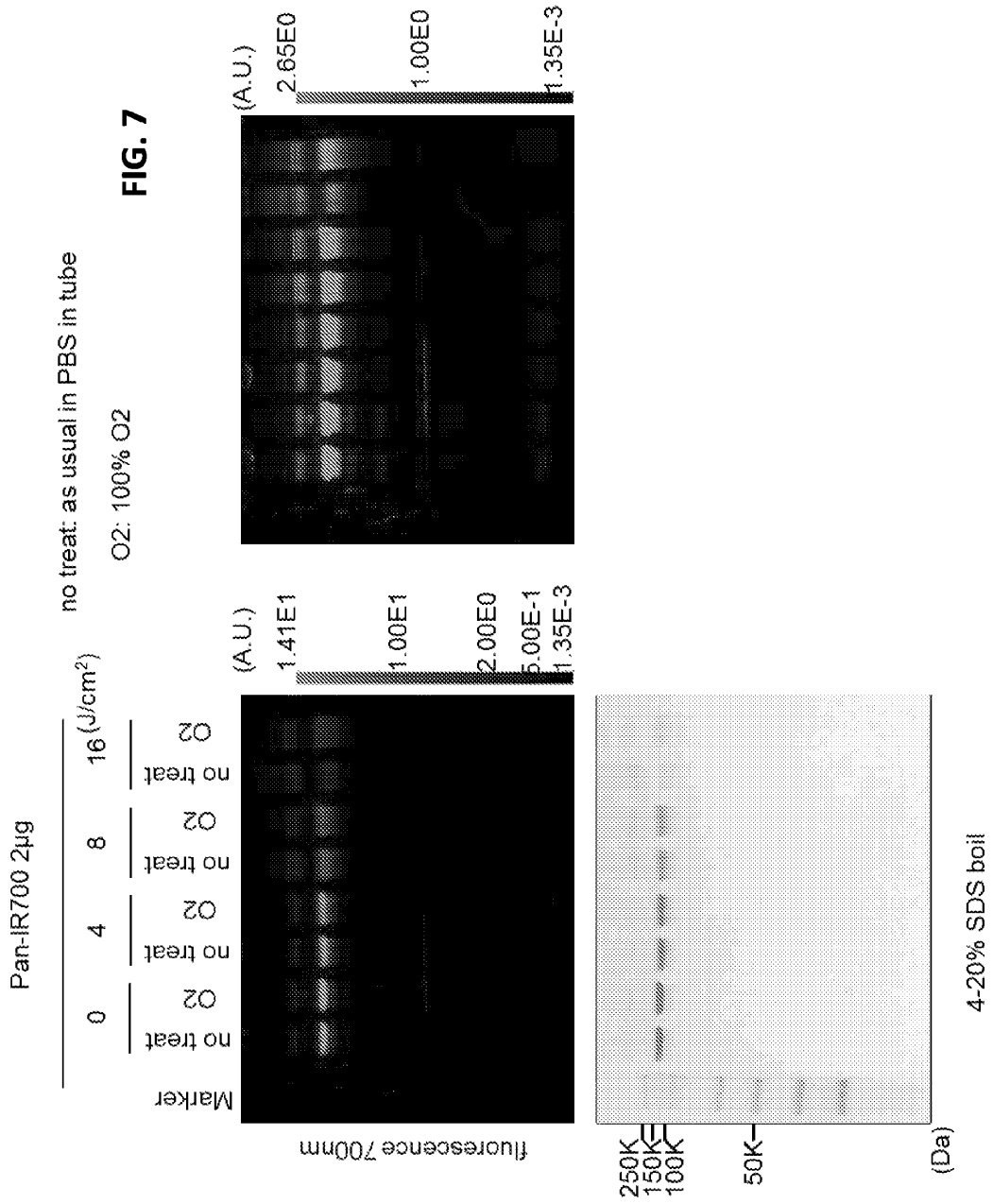

Pan-IR700 2µg
no treat: as usual in PBS in tube
O2: 100% O2
0
4
8
16 (J/cm²)
Marker
no treat
O2
(A.U.)
2.65E0
1.00E0
1.35E-3
1.41E1
1.00E1
2.00E0
5.00E-1
1.35E-3
fluorescence 700nm
4-20% SDS boil
250K
150K
100K
50K
(Da)

FIG. 8

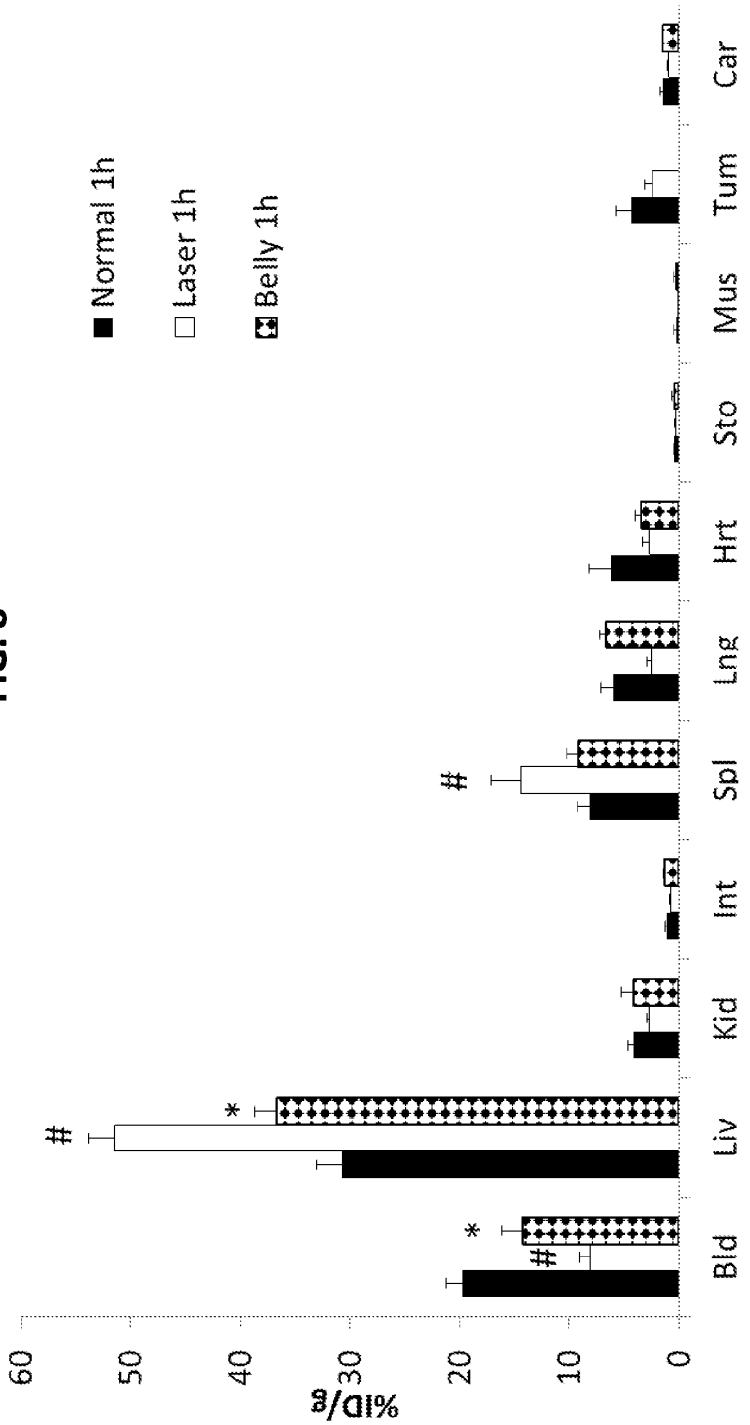

Normal 1h
Laser 1h
Belly 1h
%ID/g
60
50
40
30
20
10
0
Bld
Liv
Kid
Int
Spl
Lng
Hrt
Sto
Mus
Tum
Car
#
*
#
*
#

FIG. 9

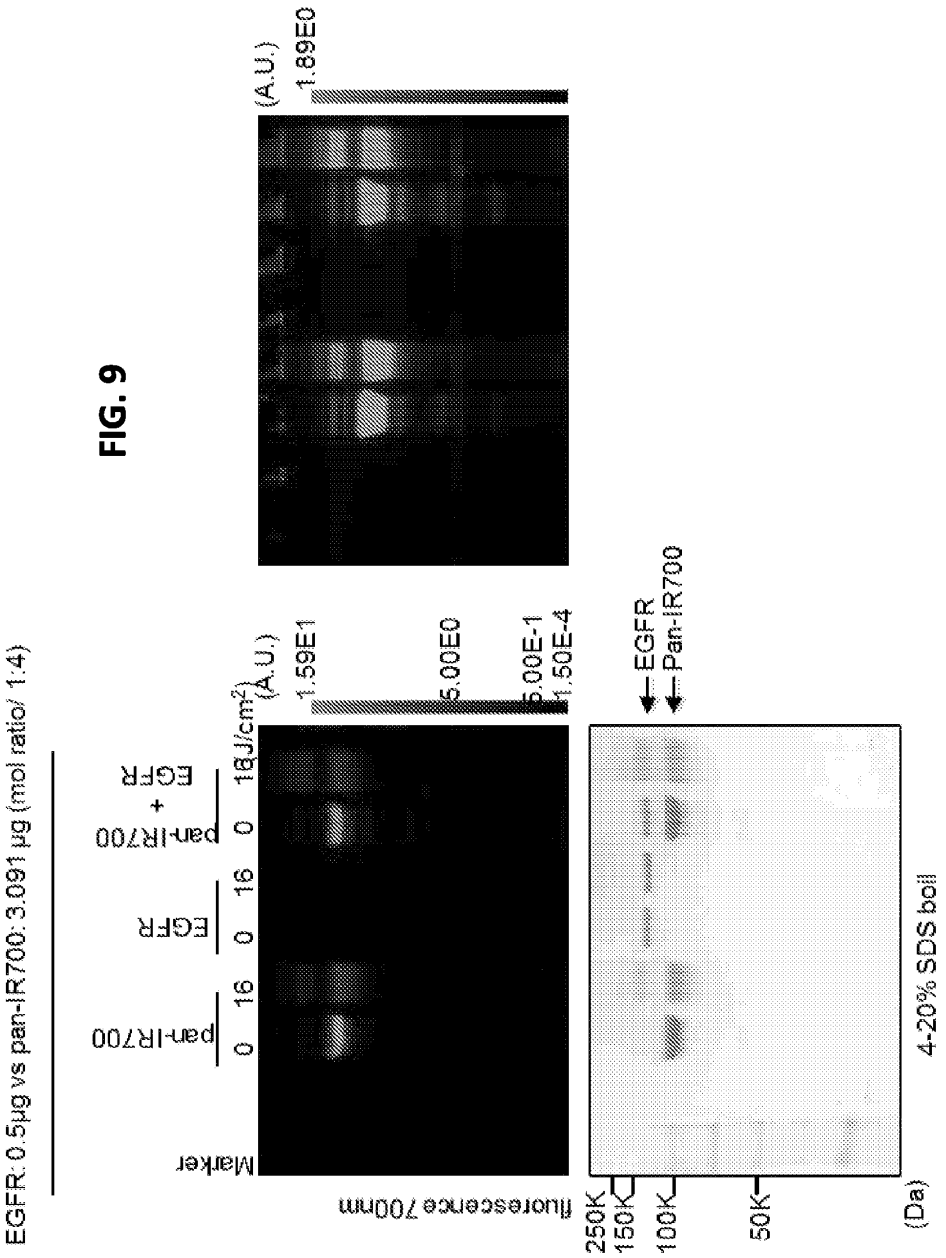

EGFR: 0.5μg vs pan-IR700: 3.091 μg (mol ratio/ 1:4)
Marker
pan-IR700
EGFR
pan-IR700 + EGFR
0
16
0
16
0
16
18J/cm²
(A.U.)
1.59E1
5.00E0
5.00E-1
1.50E-4
fluorescence 700nm
(A.U.)
1.89E0
EGFR
Pan-IR700
250K
150K
100K
50K
(Da)
4-20% SDS boil

FIG. 10B

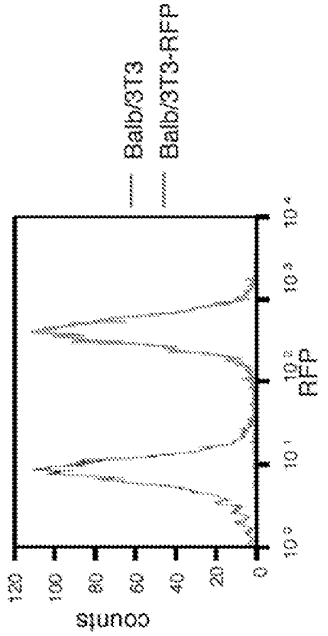


FIG. 10A

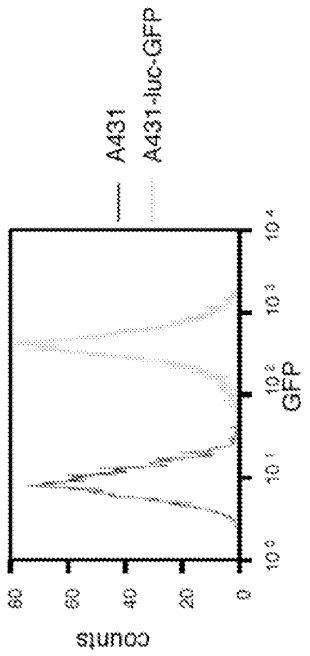


FIG. 10C

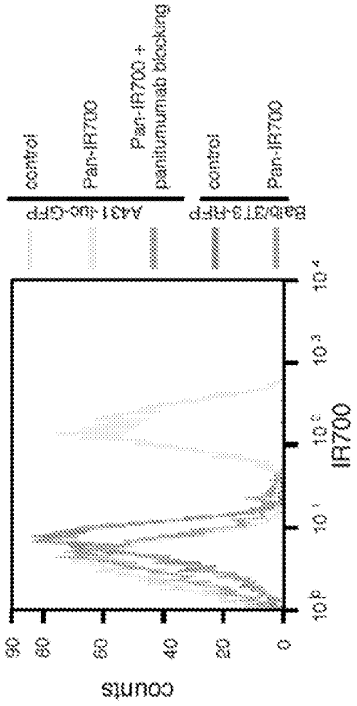


FIG. 11A

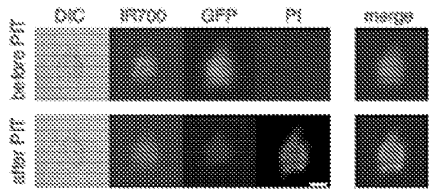


FIG. 11C

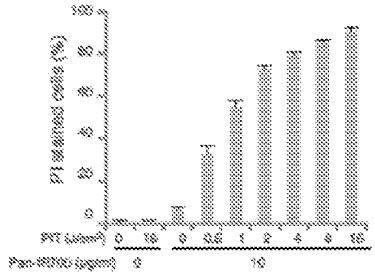


FIG. 11B

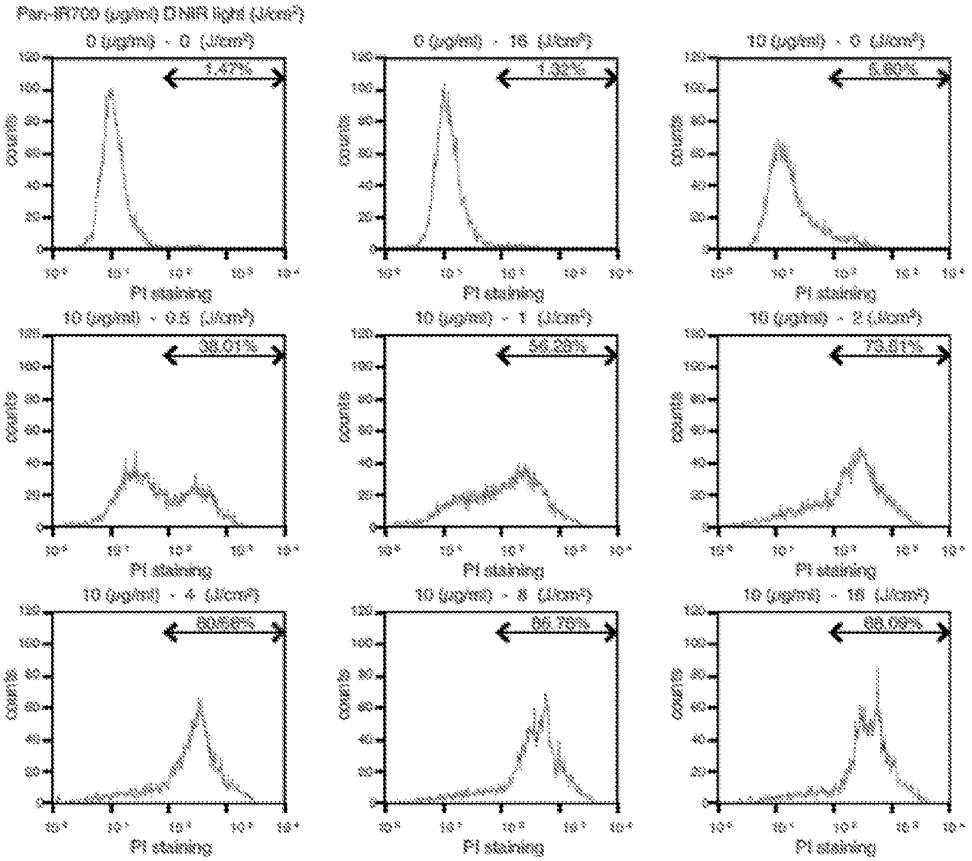
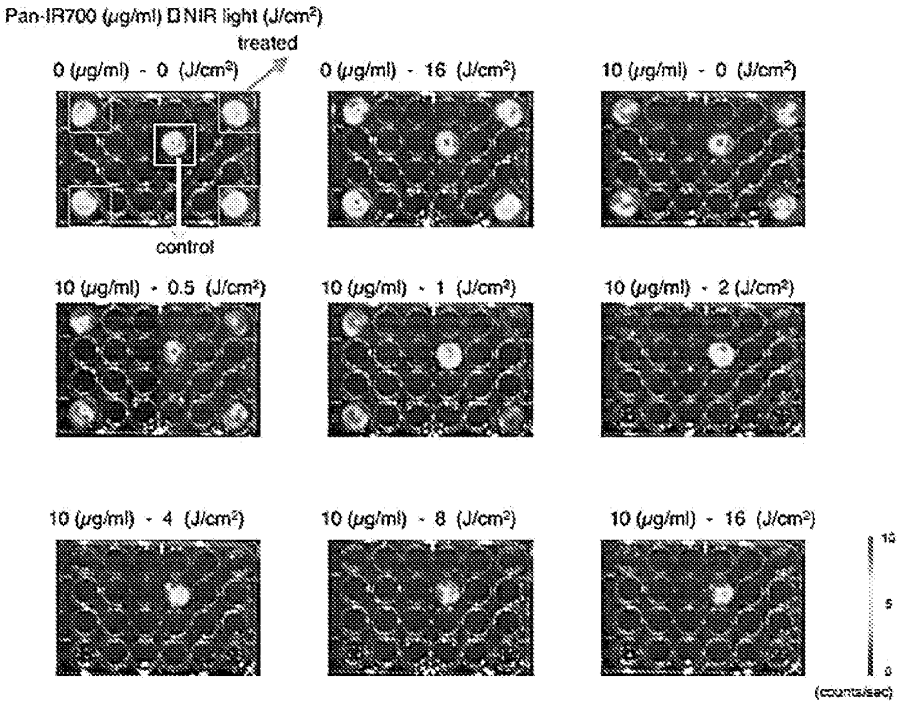


FIG. 12A



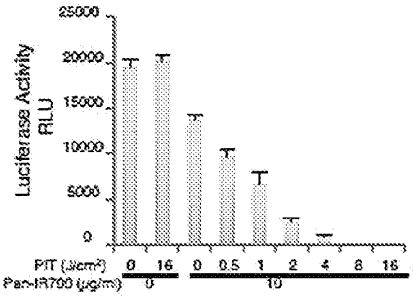


FIG. 12B

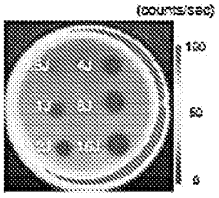


FIG. 12C

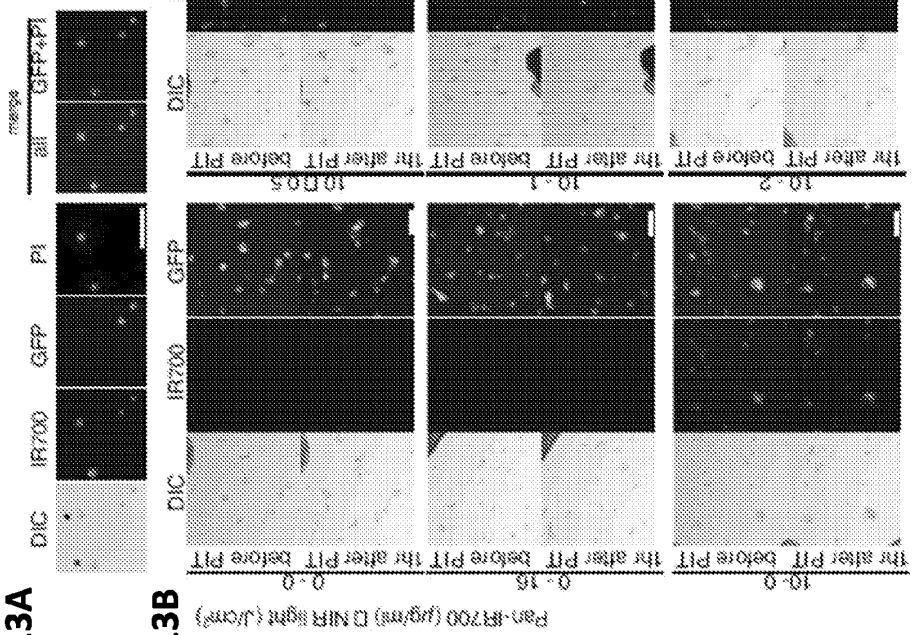


FIG. 13A

FIG. 13B

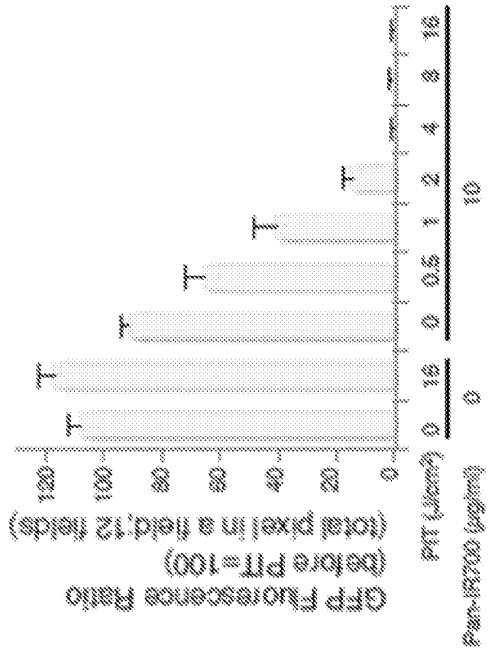


FIG. 13C

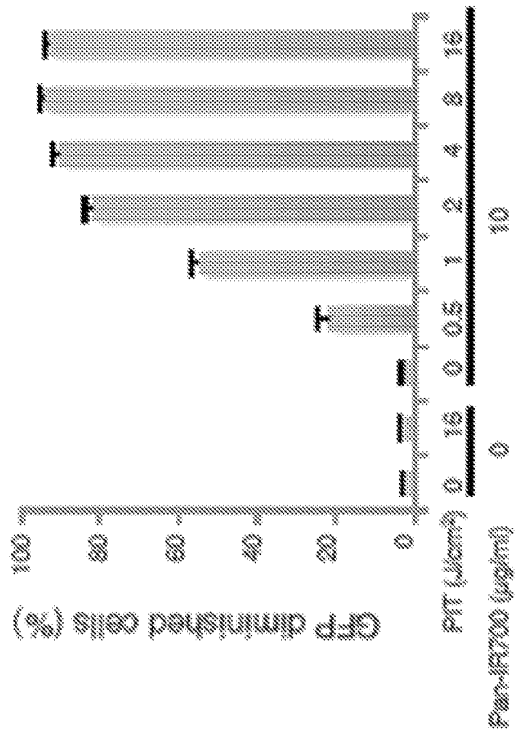


FIG. 14B

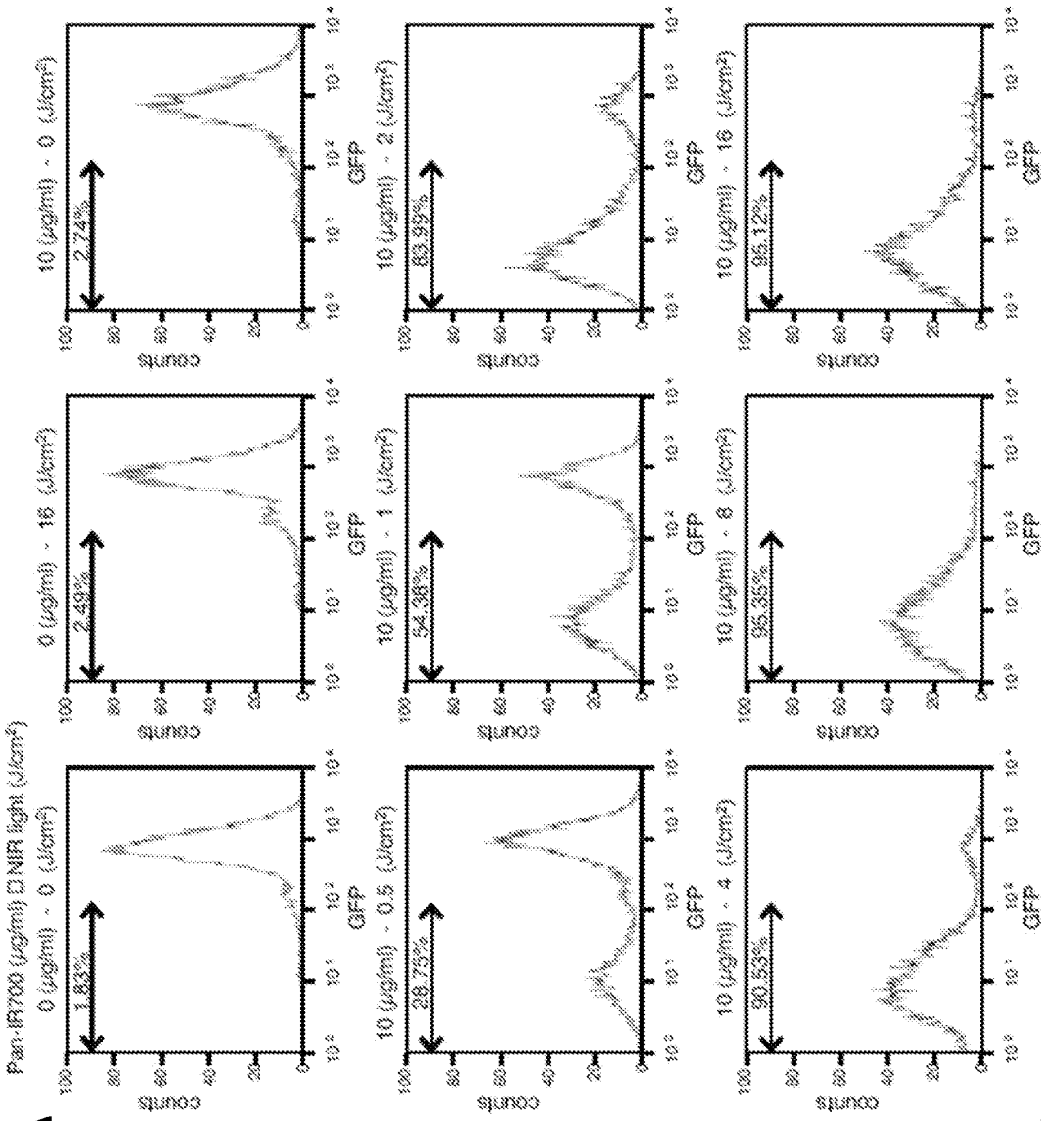

Pan-IR700 (μg/ml) ☐ NIR light (J/cm²)
0 (μg/ml) - 0 (J/cm²)
1.83%
0 (μg/ml) - 16 (J/cm²)
2.49%
10 (μg/ml) - 0 (J/cm²)
2.74%
10 (μg/ml) - 0.5 (J/cm²)
28.75%
10 (μg/ml) - 1 (J/cm²)
54.38%
10 (μg/ml) - 2 (J/cm²)
83.92%
10 (μg/ml) - 4 (J/cm²)
90.53%
10 (μg/ml) - 8 (J/cm²)
95.35%
10 (μg/ml) - 16 (J/cm²)
96.12%
counts
GFP

FIG. 14A

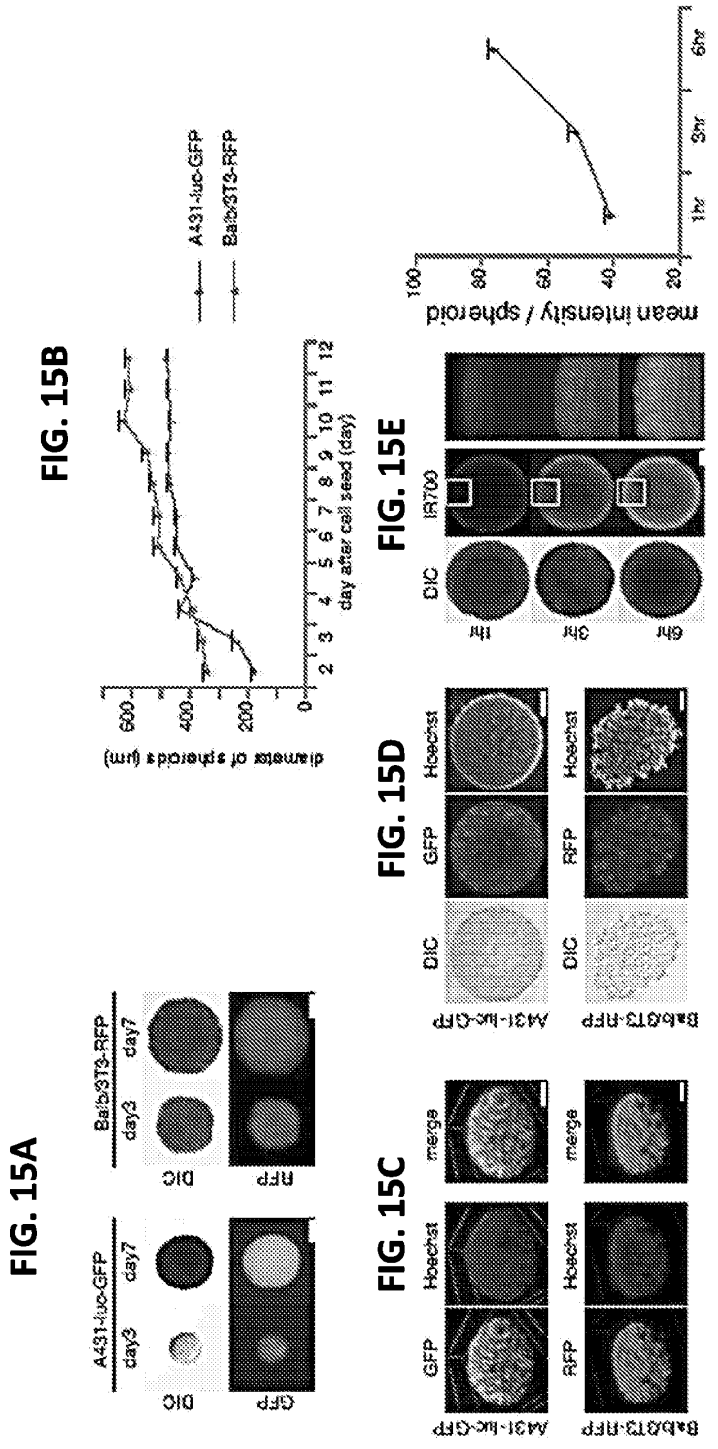

FIG. 15A
A431-luc-GFP
Balb/3T3-RFP
day3
day7
DIC
GFP
RFP
FIG. 15B
A431-luc-GFP
Balb/3T3-RFP
diameter of spheroids (μm)
day after cell seed (day)
FIG. 15C
A431-luc-GFP
Balb/3T3-RFP
GFP
RFP
Hoechst
merge
FIG. 15D
A431-luc-GFP
Balb/3T3-RFP
DIC
GFP
RFP
Hoechst
FIG. 15E
DIC
IR700
1hr
3hr
6hr
mean intensity / spheroid
1hr
3hr
6hr

FIG. 16

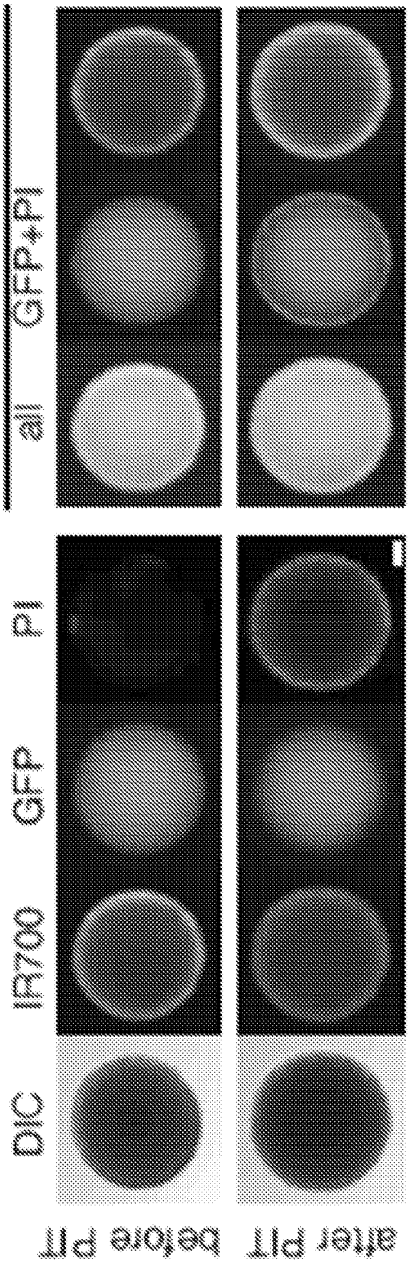


FIG. 17A

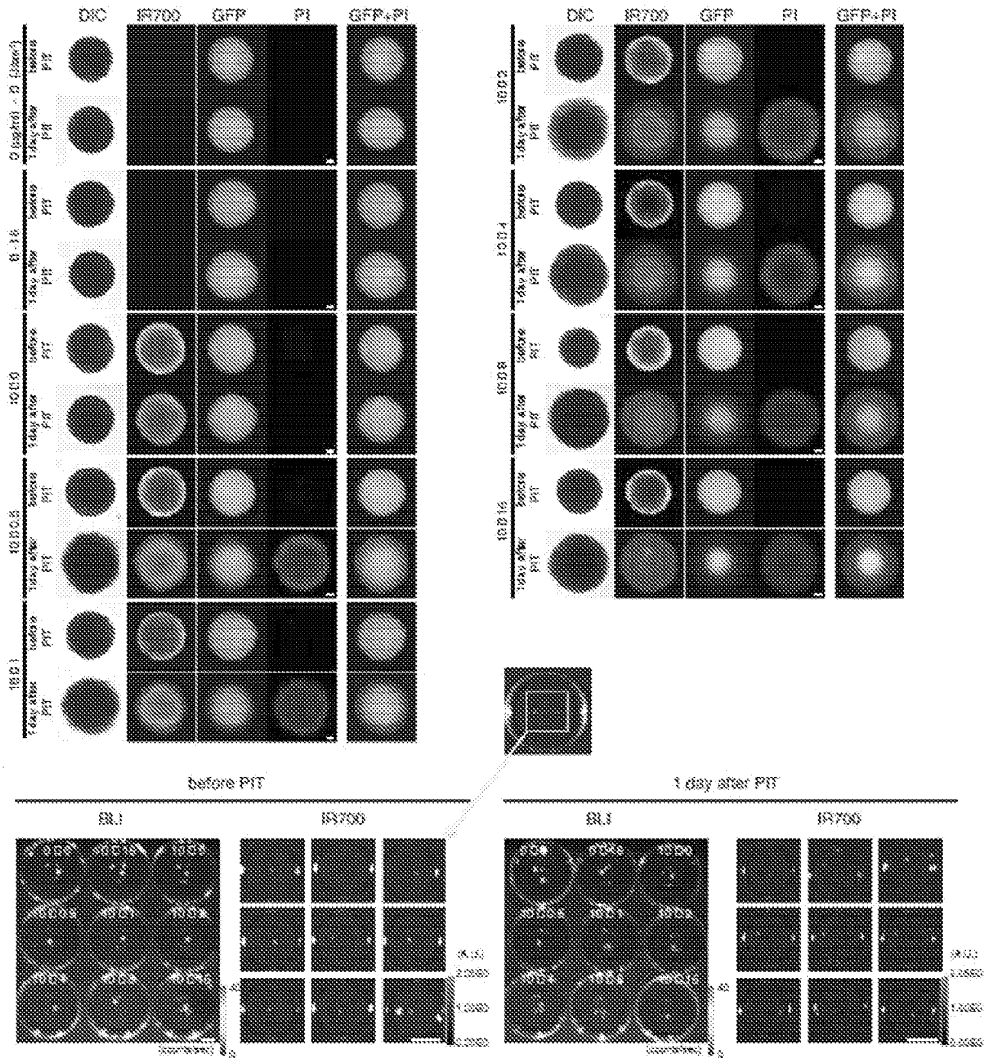


FIG. 17B

FIG. 17D

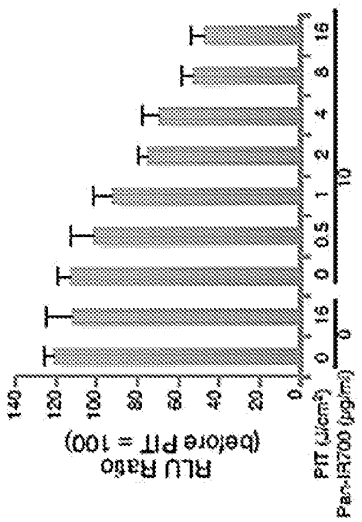


FIG. 17C

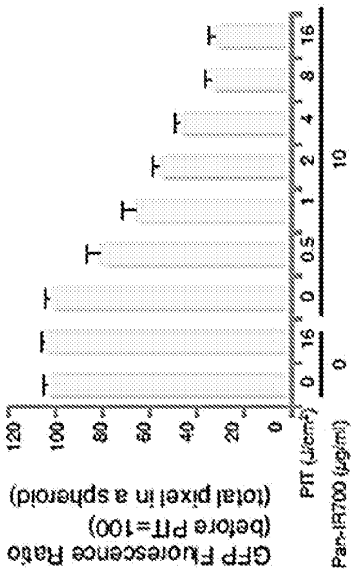


FIG. 17E

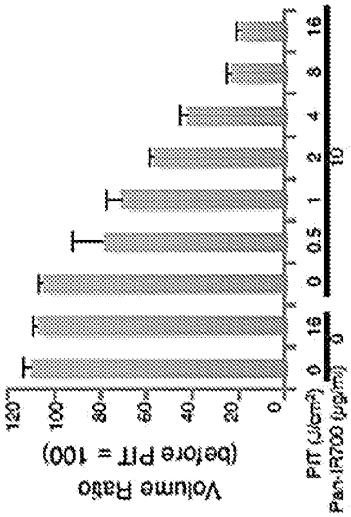




FIG. 18A

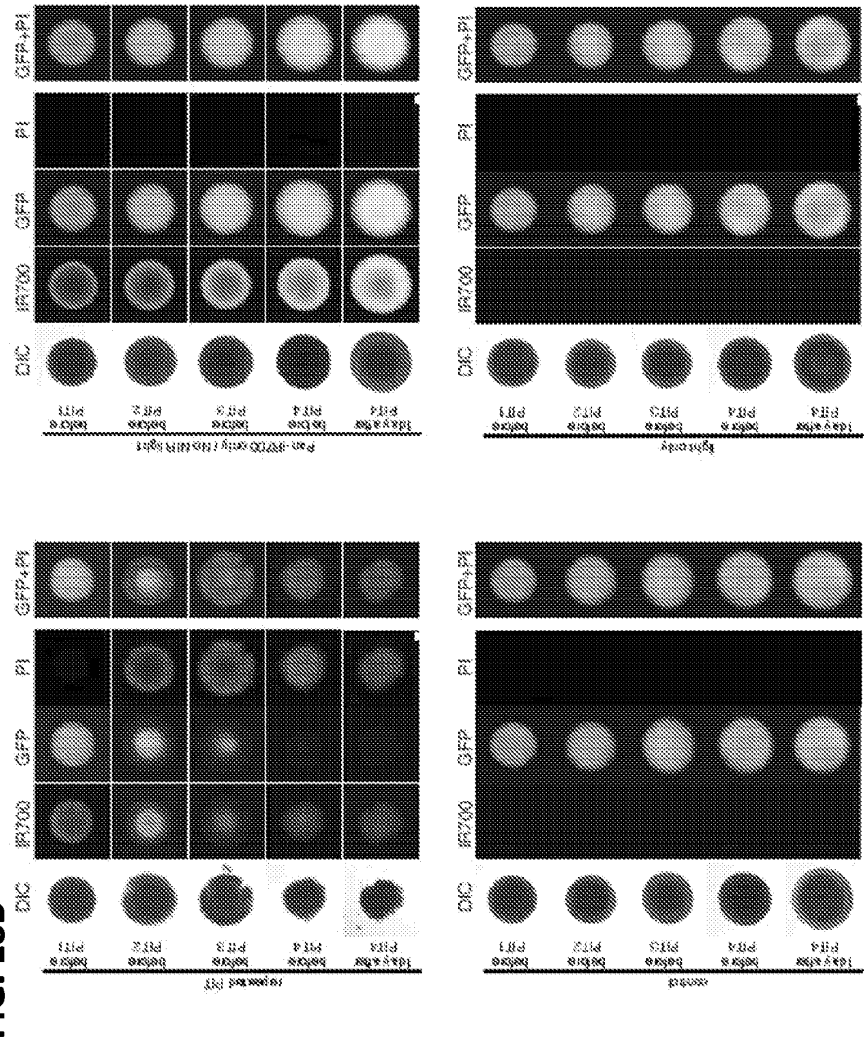


FIG. 18B

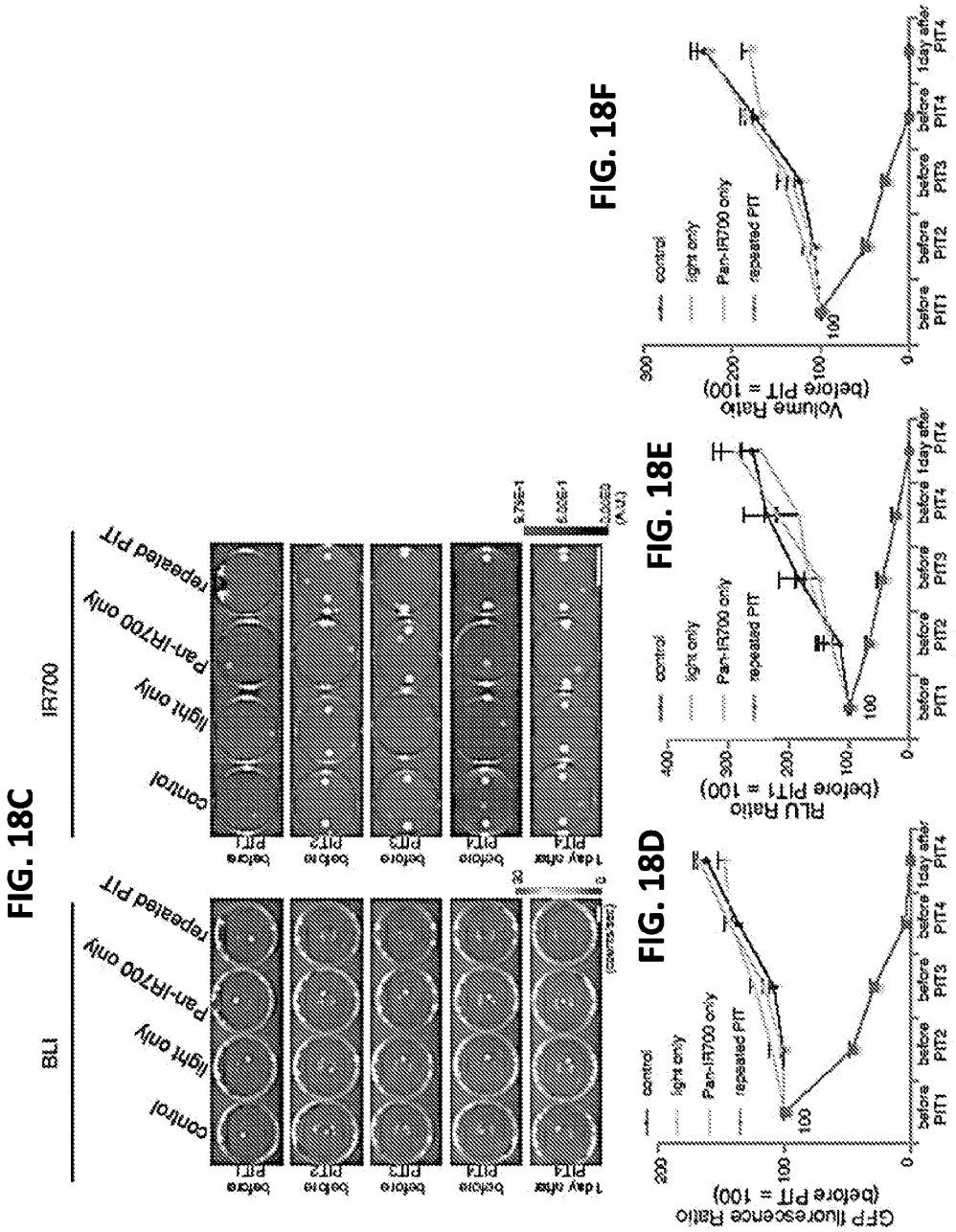

FIG. 18C
BLI
IR700
control
light only
Pan-IR700 only
repeated PIT
before PIT1
before PIT2
before PIT3
before PIT4
1day after PIT4
FIG. 18D
GFP fluorescence Ratio (before PIT = 100)
FIG. 18E
RLU Ratio (before PIT1 = 100)
FIG. 18F
Volume Ratio (before PIT = 100)

FIG. 19A

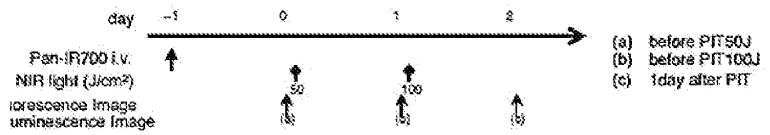


FIG. 19B

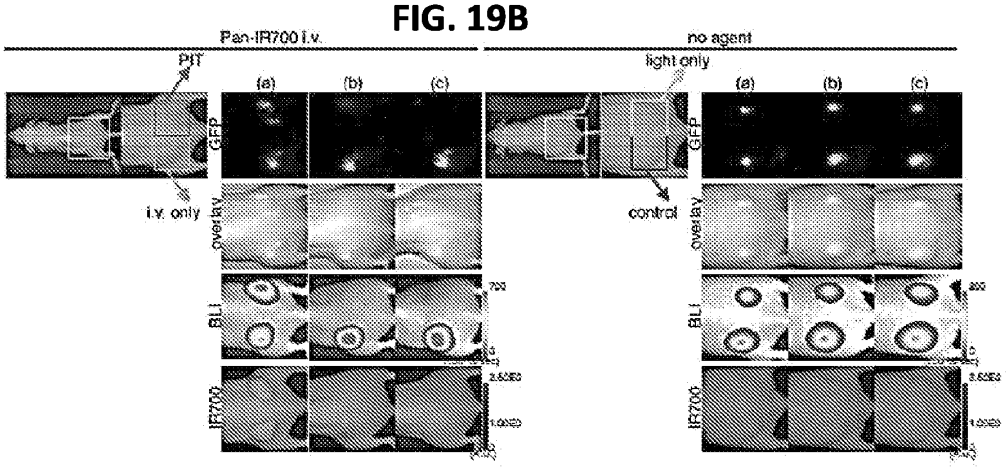


FIG. 19C

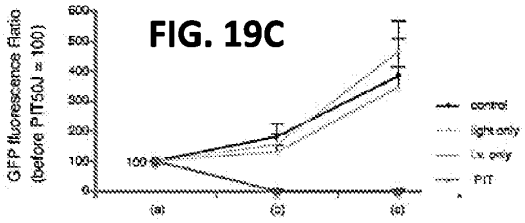


FIG. 19D

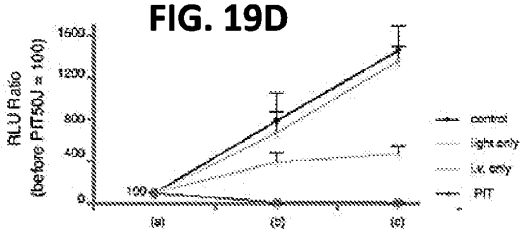


FIG. 20

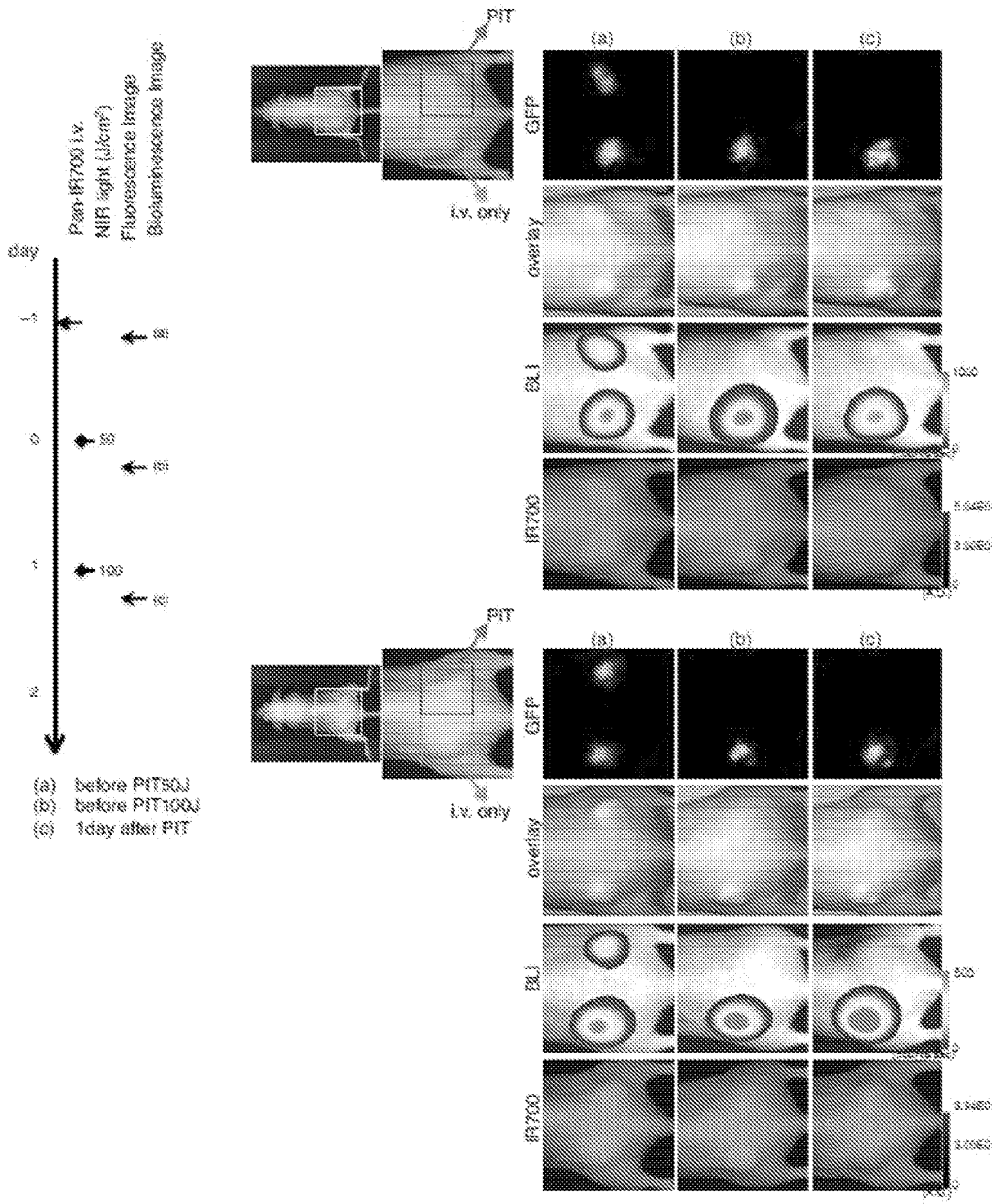

day
Pan-IR700 i.v.
NIR light (J/cm²)
Fluorescence Image
Bioluminescence Image
-1
0
1
2
(a) before PIT50J
(b) before PIT100J
(c) 1day after PIT
PIT
i.v. only
(a)
(b)
(c)
GFP
overlay
BLI
IR700

FIG. 21A

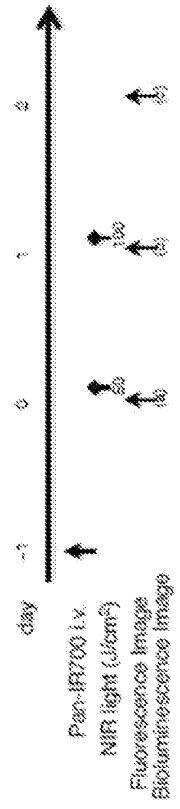
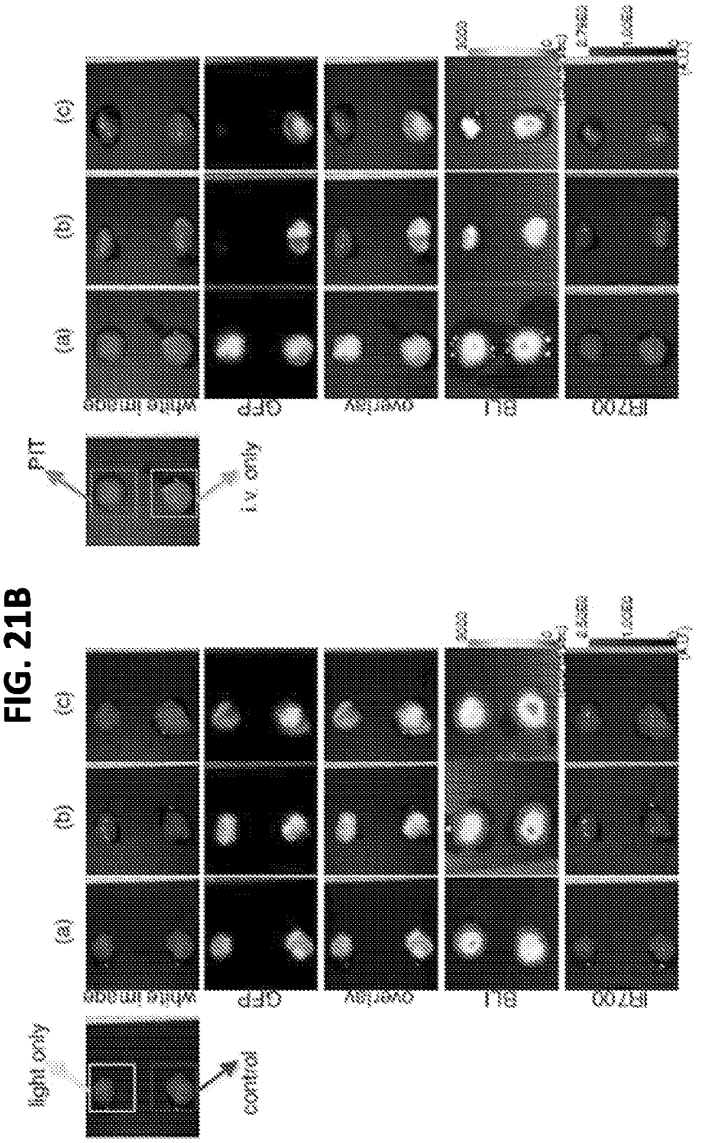


FIG. 21B



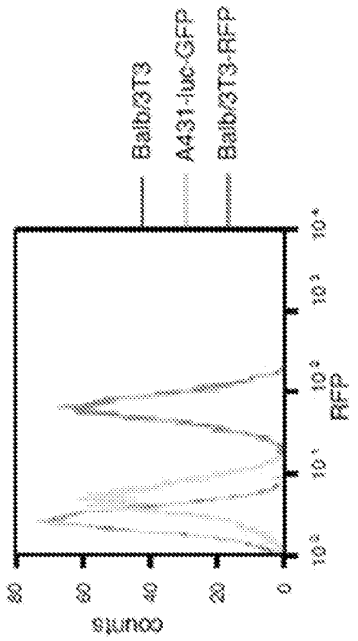
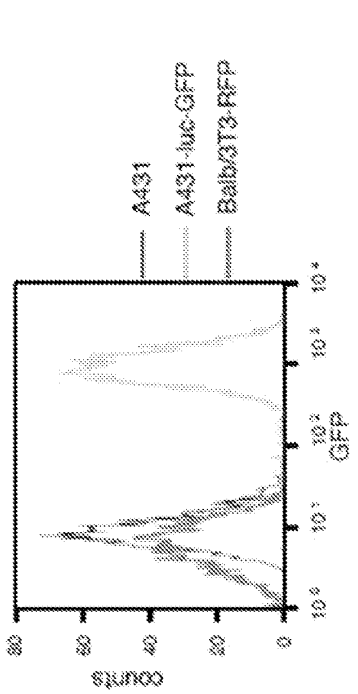


FIG. 22A



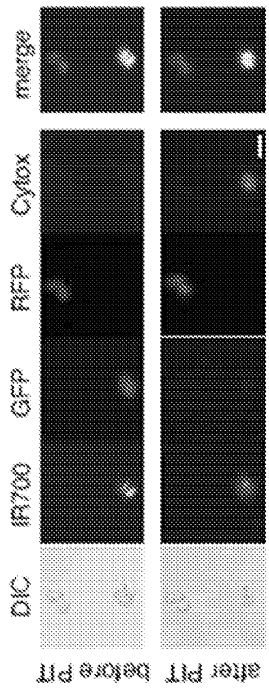


FIG. 22B

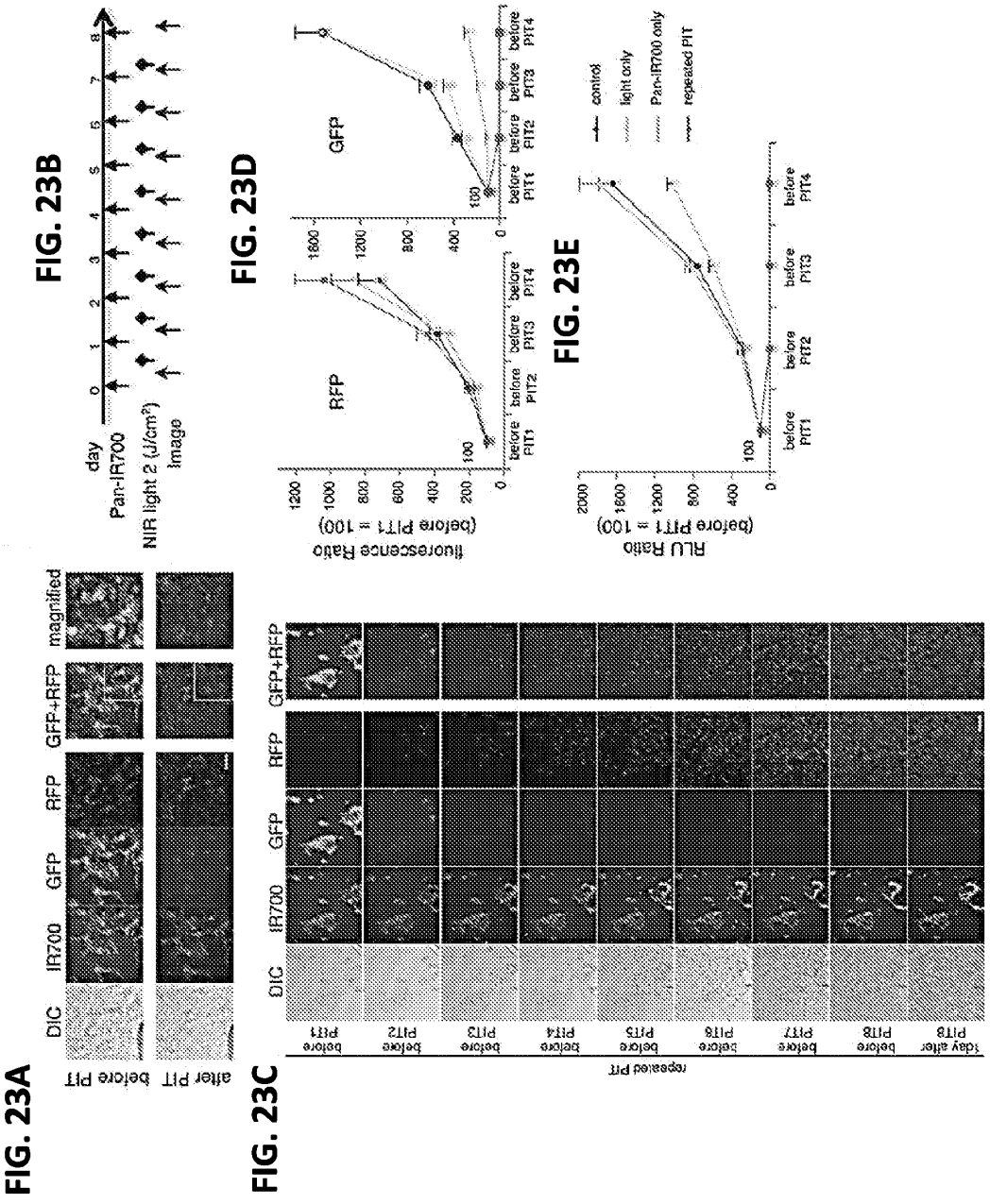

FIG. 23A
DIC
IR700
GFP
RFP
GFP+RFP
magnified
before PIT
after PIT
FIG. 23B
day
Pan-IR700
NIR light 2 (J/cm²)
image
FIG. 23C
DIC
IR700
GFP
RFP
GFP+RFP
repeated PIT
FIG. 23D
RFP
GFP
fluorescence Ratio
(before PIT1 = 100)
before PIT1
before PIT2
before PIT3
before PIT4
FIG. 23E
control
light only
Pan-IR700 only
repeated PIT
RLU Ratio
(before PIT1 = 100)

FIG. 24A

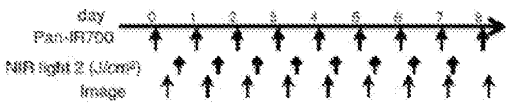


FIG. 24B

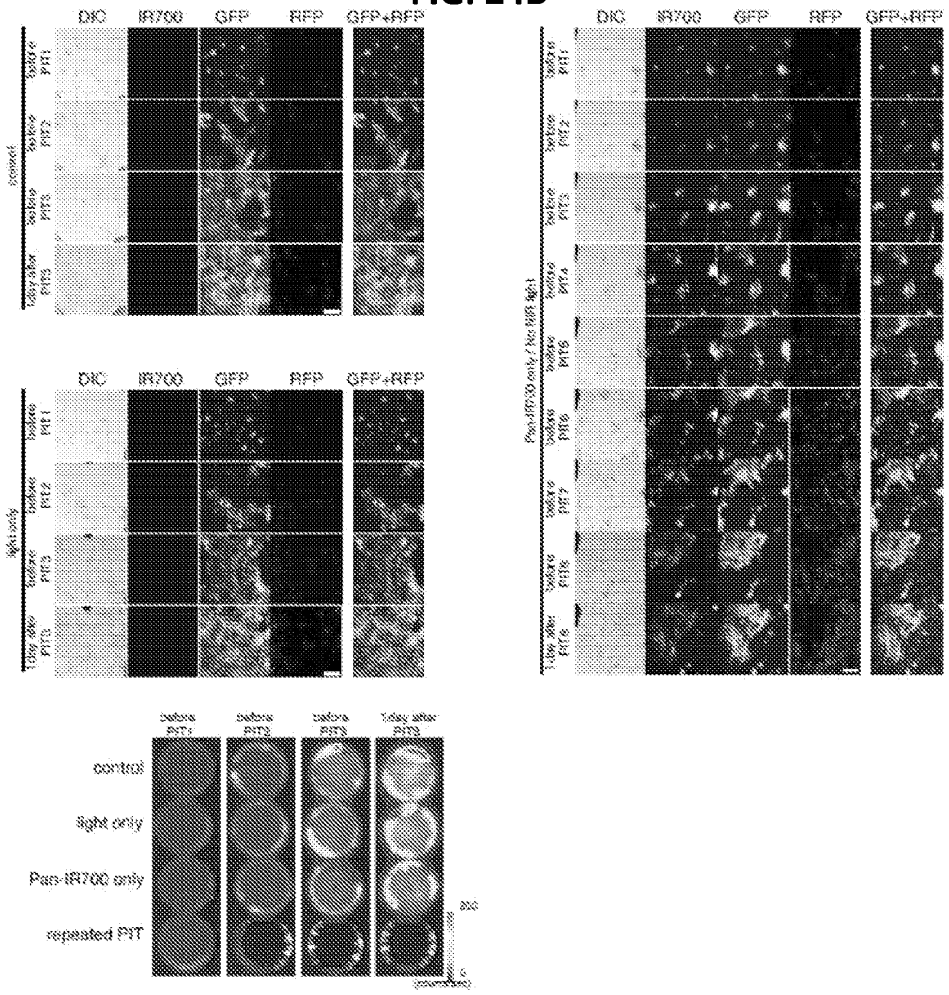


FIG. 24C

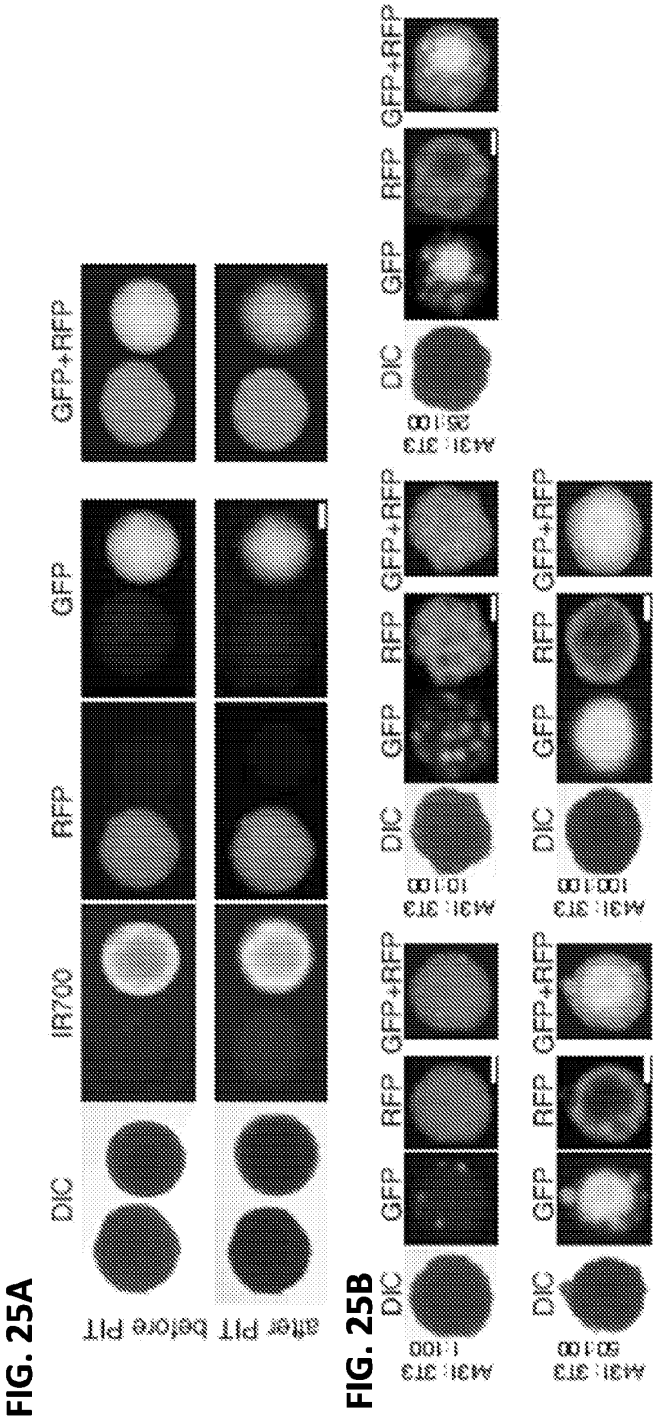


FIG. 25A

FIG. 25B

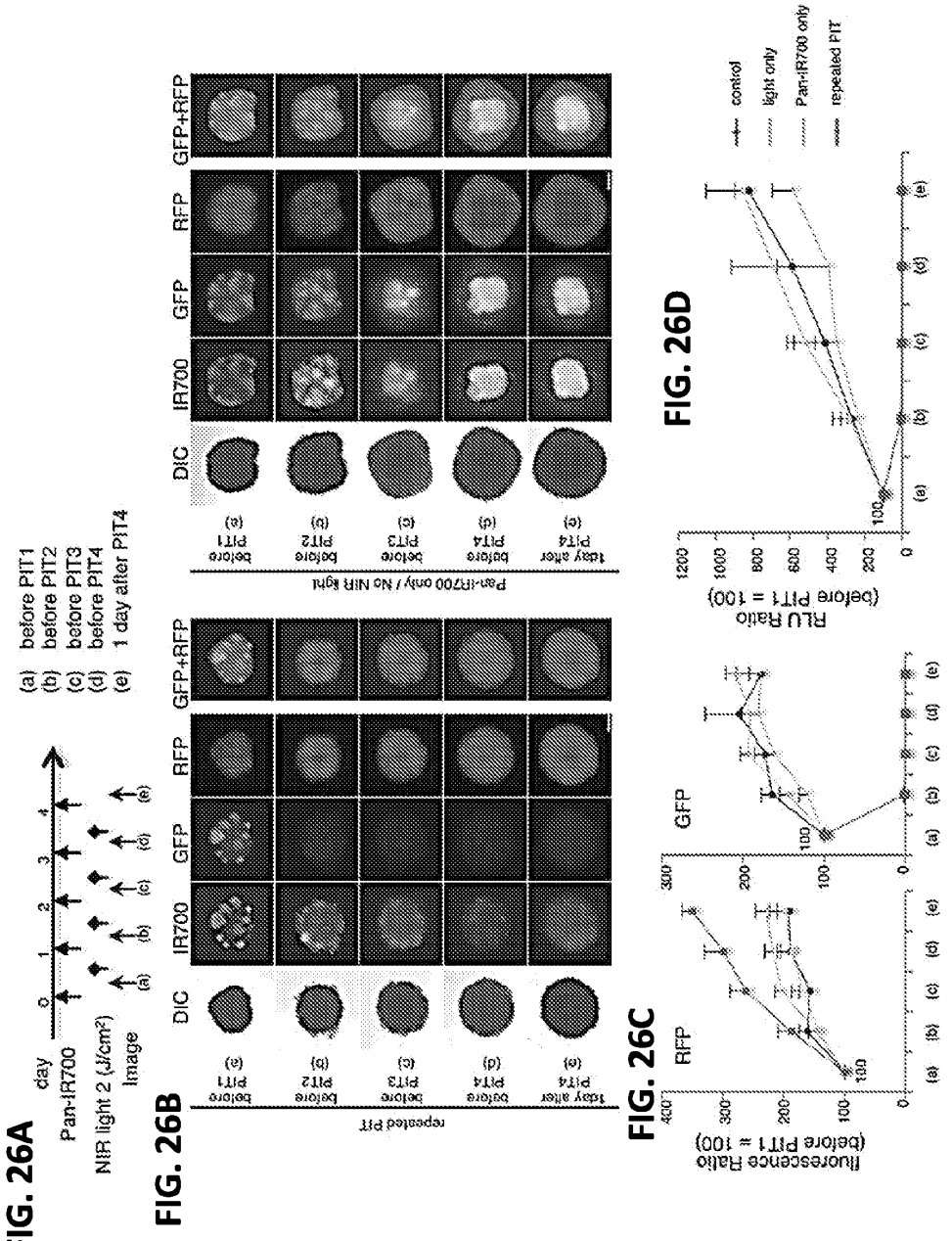
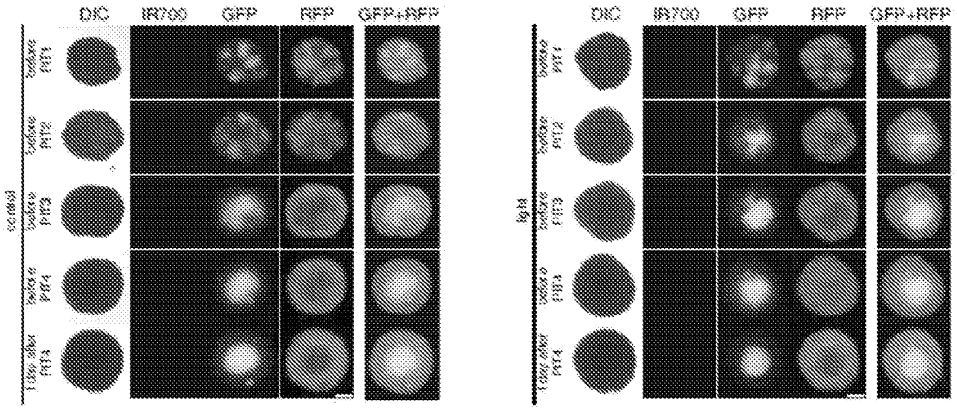

FIG. 26A
day
Pan-IR700
NIR light 2 (J/cm²)
Image
(a) before PIT1
(b) before PIT2
(c) before PIT3
(d) before PIT4
(e) 1 day after PIT4
FIG. 26B
DIC
IR700
GFP
RFP
GFP+RFP
repeated PIT
Pan-IR700 only / No NIR light
FIG. 26C
RFP
GFP
Fluorescence Ratio
(before PIT1 = 100)
FIG. 26D
RLU Ratio
(before PIT1 = 100)
control
light only
Pan-IR700 only
repeated PIT

FIG. 27A



FIG. 27B



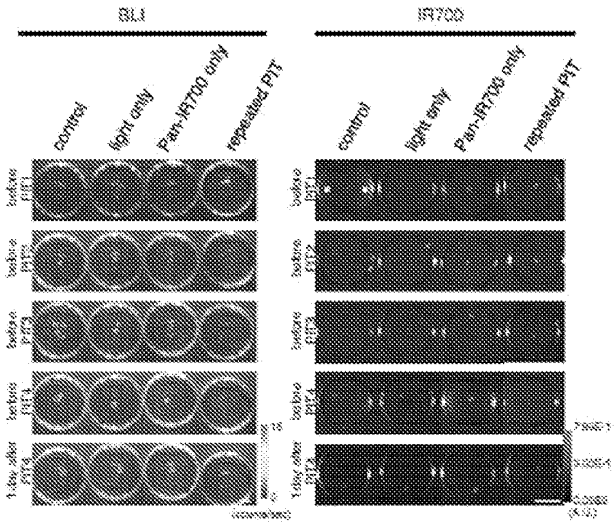


FIG. 27C

FIG. 28B

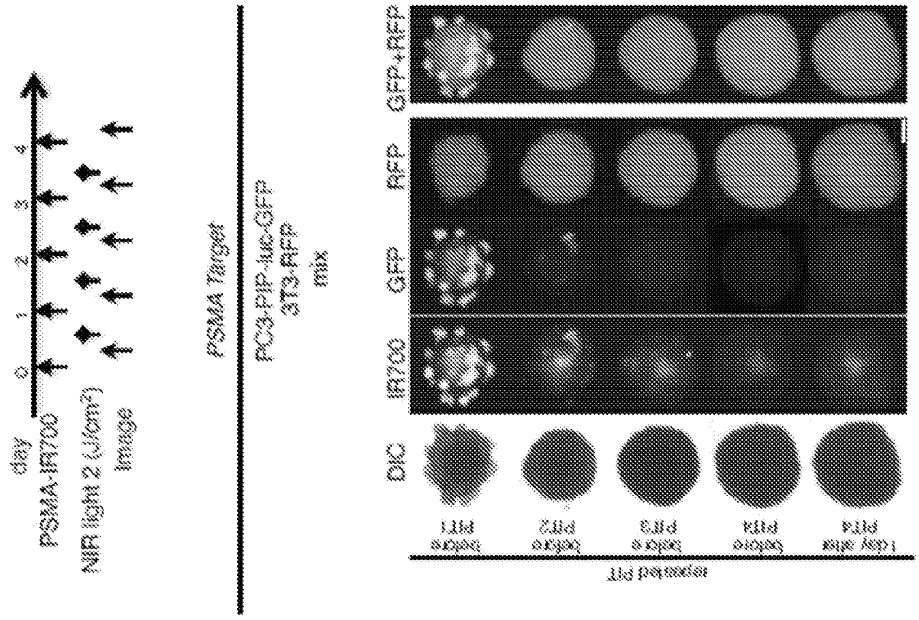


FIG. 28A

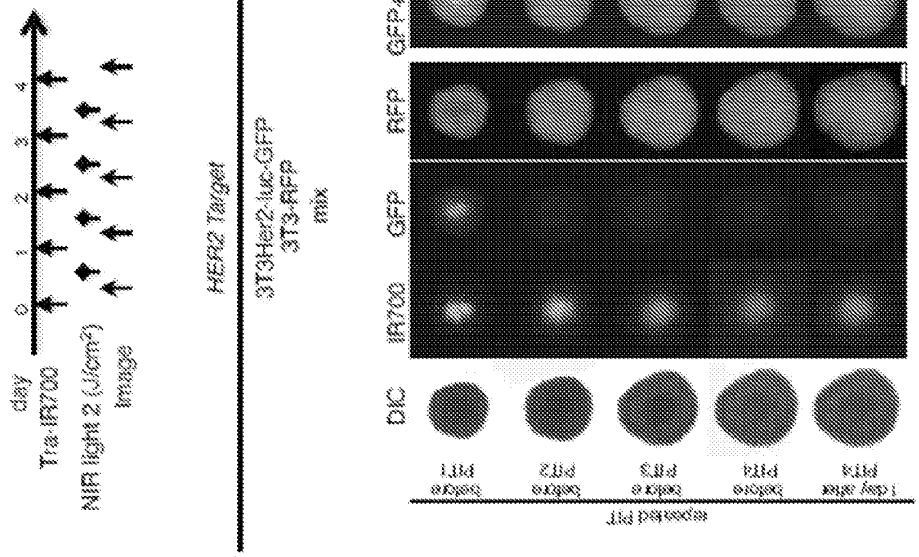


FIG. 29A

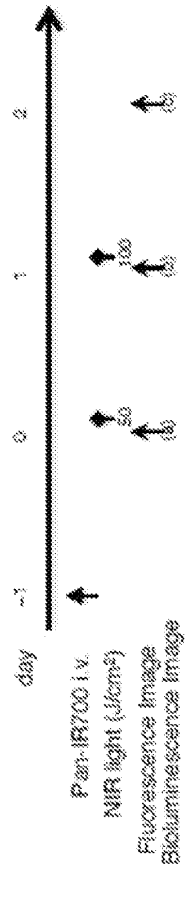


FIG. 29B

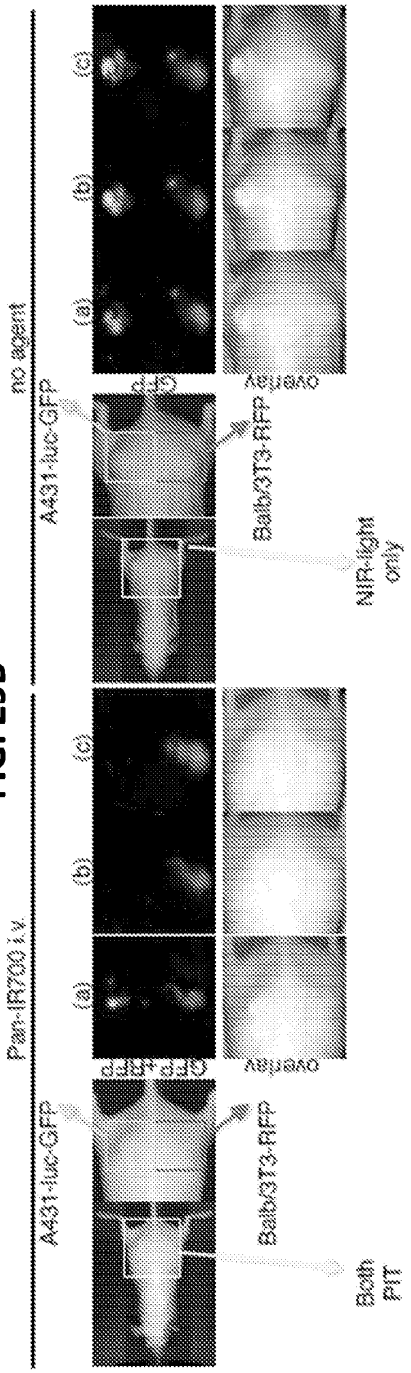


FIG. 30A

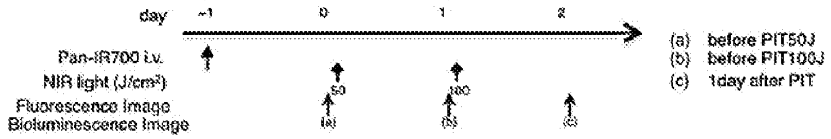


FIG. 30B

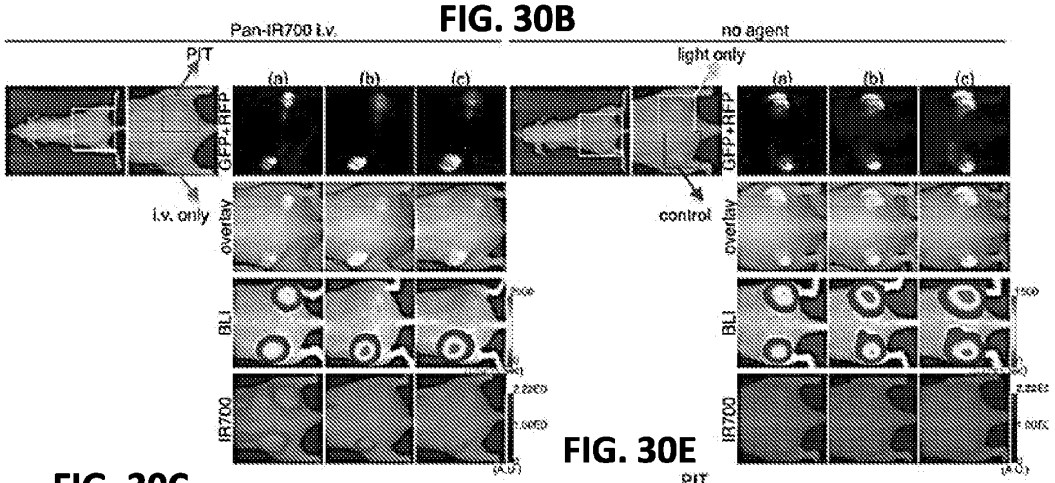


FIG. 30C

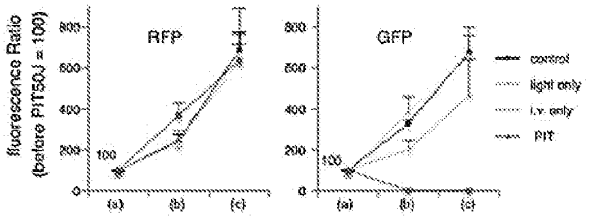


FIG. 30D

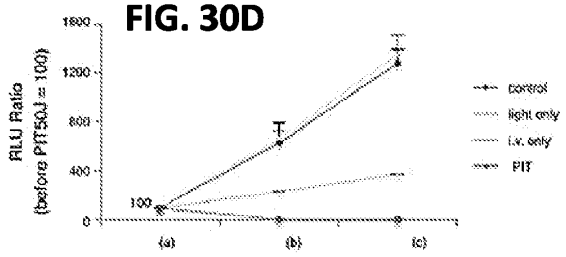


FIG. 30E

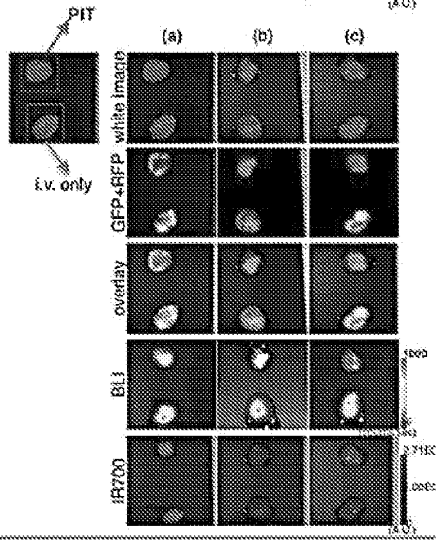


FIG. 31

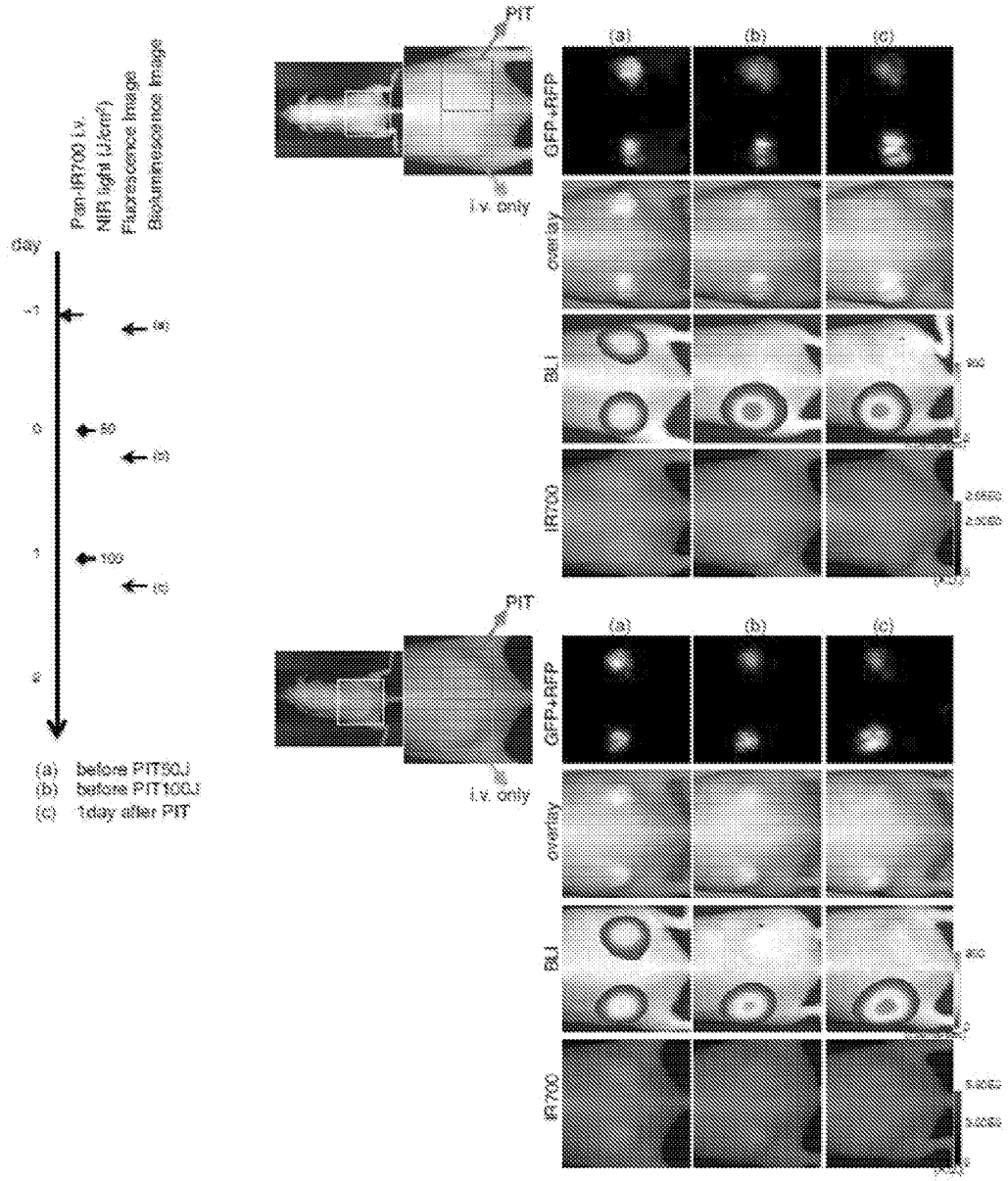

day
Pan-IR700 i.v.
NIR light (J/cm²)
Fluorescence Image
Bioluminescence Image
-1
0
1
4
50
100
(a) before PIT50J
(b) before PIT100J
(c) 1day after PIT
PIT
i.v. only
(a)
(b)
(c)
GFP+RFP
overlay
BLI
IR700

FIG. 32A

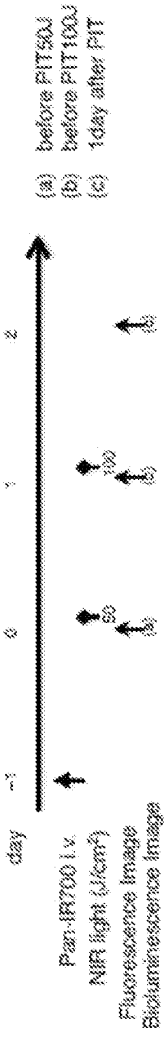


FIG. 32B

