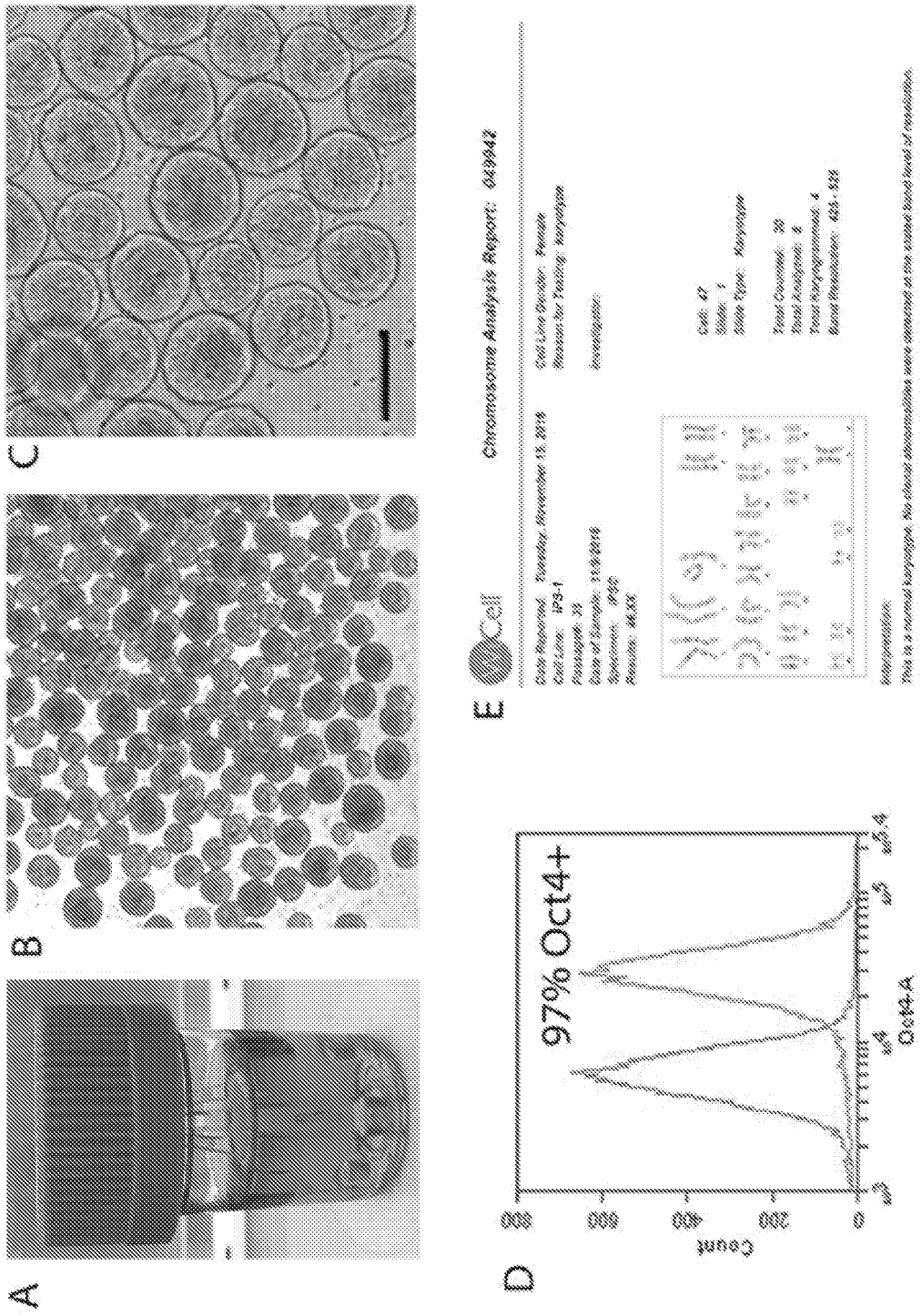



Figures 1A-1E

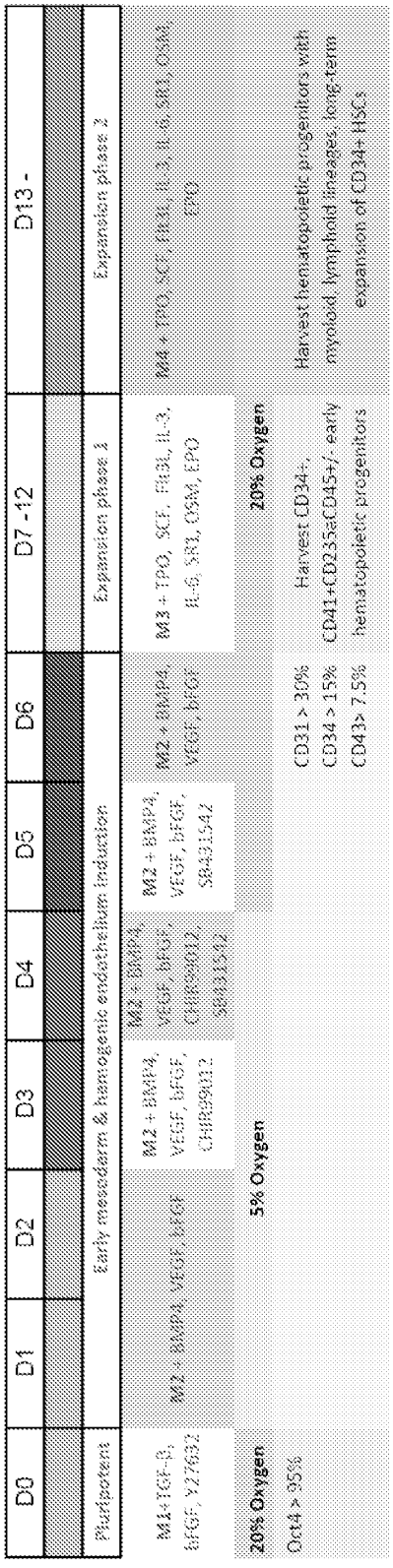



Figure 2

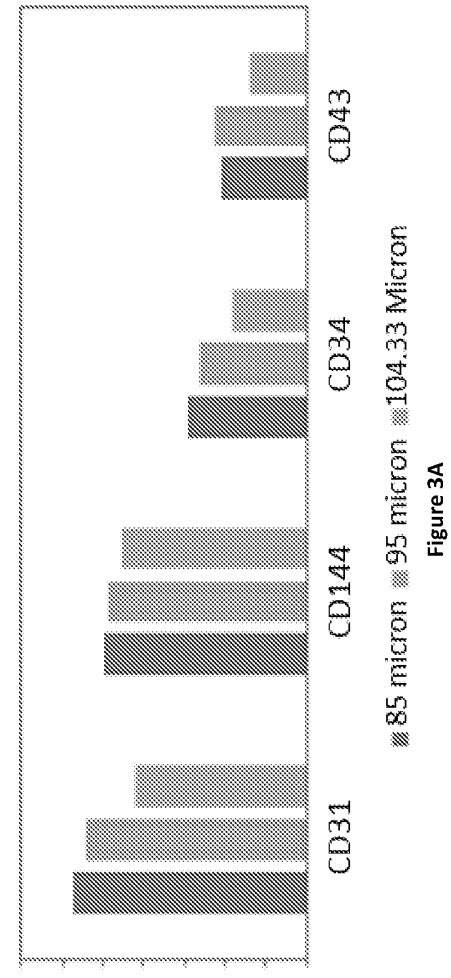



Figure 3A

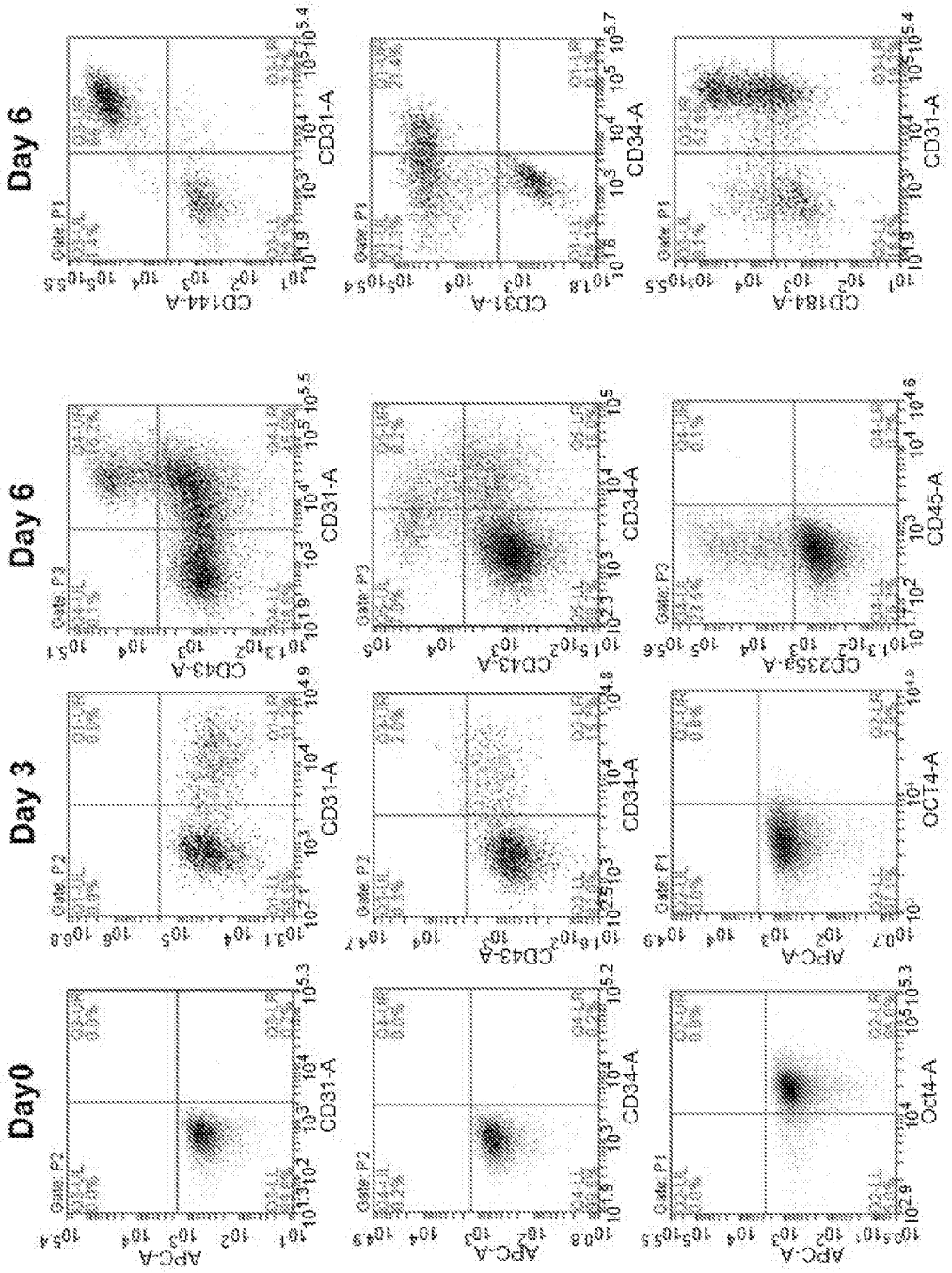

Day0
Day 3
Day 6
Day 6
APC-A
CD31-A
CD34-A
Oct4-A
OCT4-A
CD43-A
CD45-A
CD235a-A
CD144-A
CD184-A
Gate P1
Gate P2
Gate P3

Figure 3B

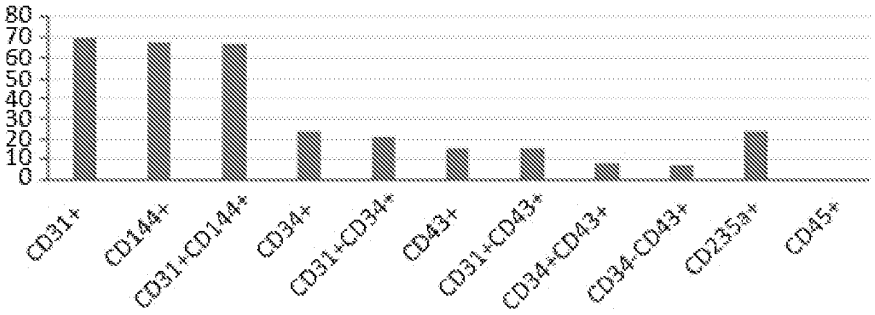
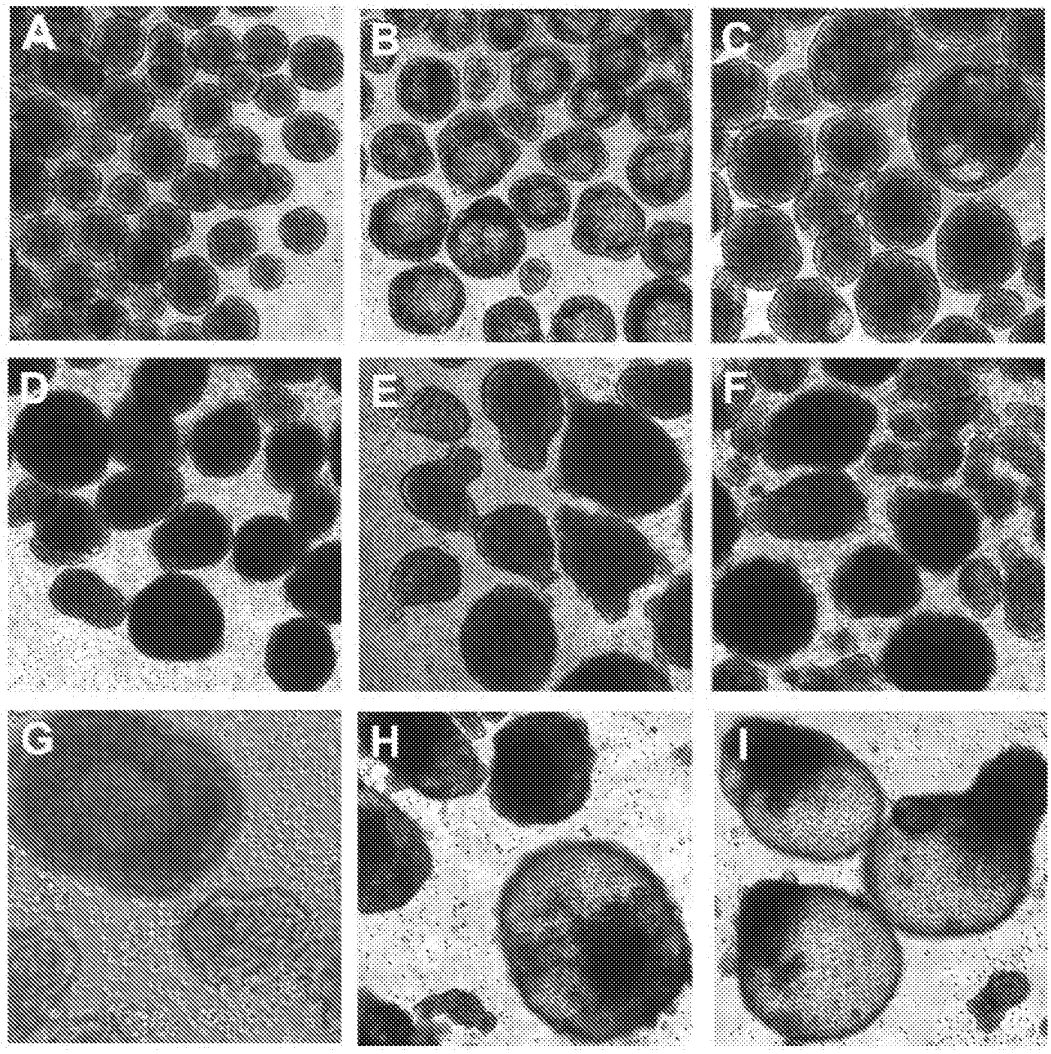



Figure 3C




Figures 4A-4I

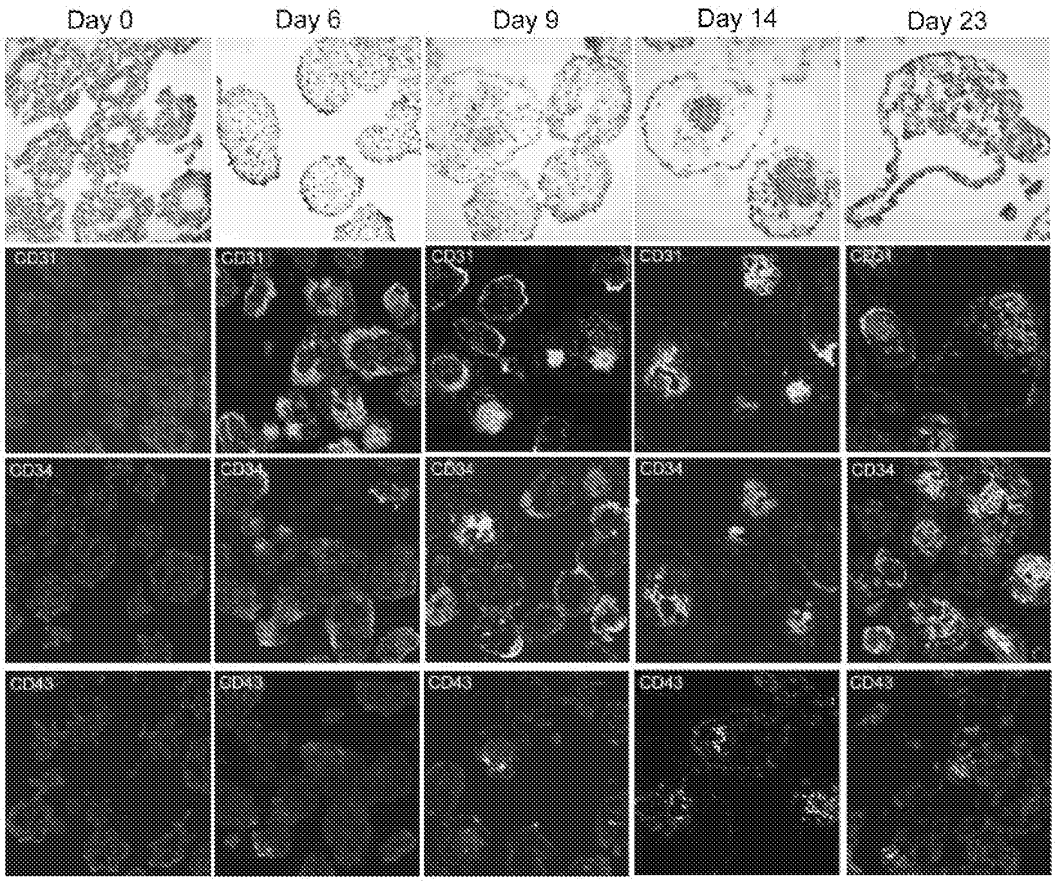
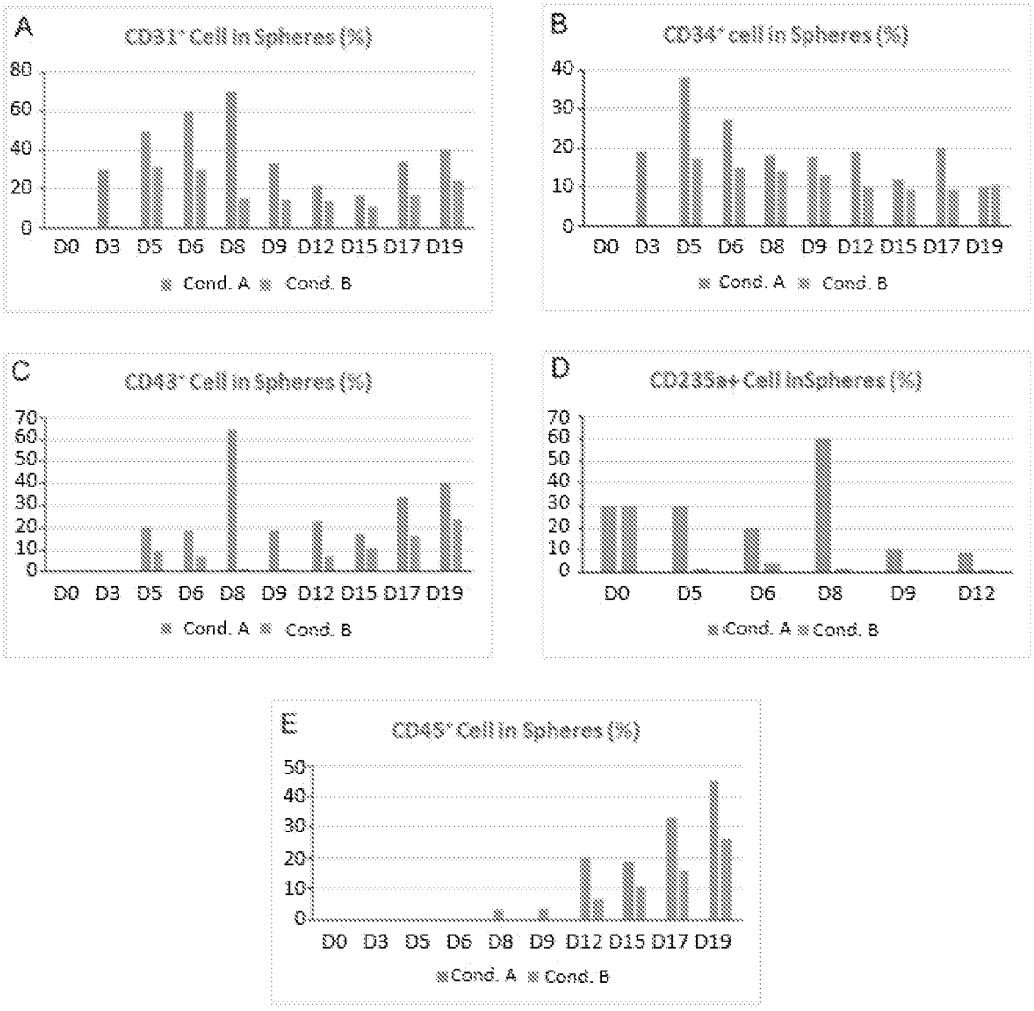


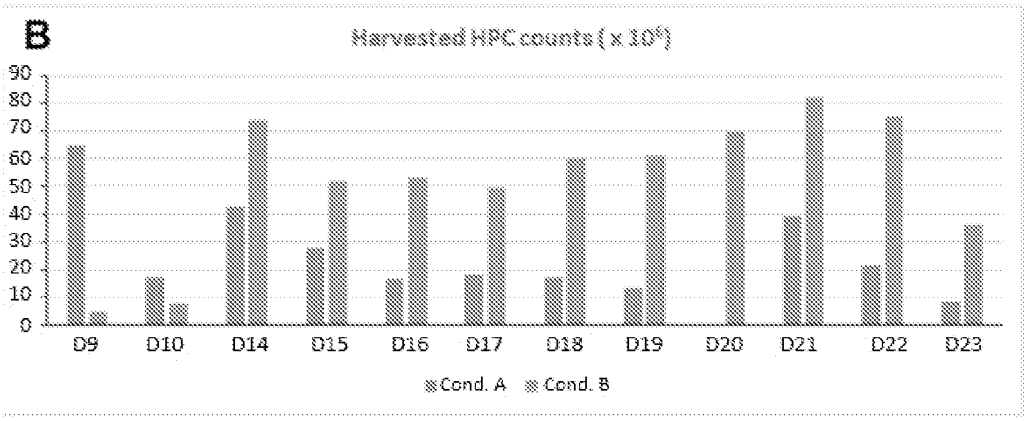

Figure 5




**Figures 6A-6E**

**A** Release HPC counts (x $10^6$)

| | Cond. A | Cond. B |
|---|---|---|
| D9 | 64.36 | 4.9 |
| D10 | 17.24 | 7.94 |
| D14 | 42.5 | 73.6 |
| D15 | 28 | 52 |
| D16 | 16.3 | 52.7 |
| D17 | 18 | 49.2 |
| D18 | 17 | 60 |
| D19 | 13.2 | 61 |
| D20 | | 69.4 |
| D21 | 39.2 | 82 |
| D22 | 21.4 | 75.4 |
| D23 | 8.4 | 36 |
| Total | 285.6 | 624.14 |




**Figures 7A-7B**

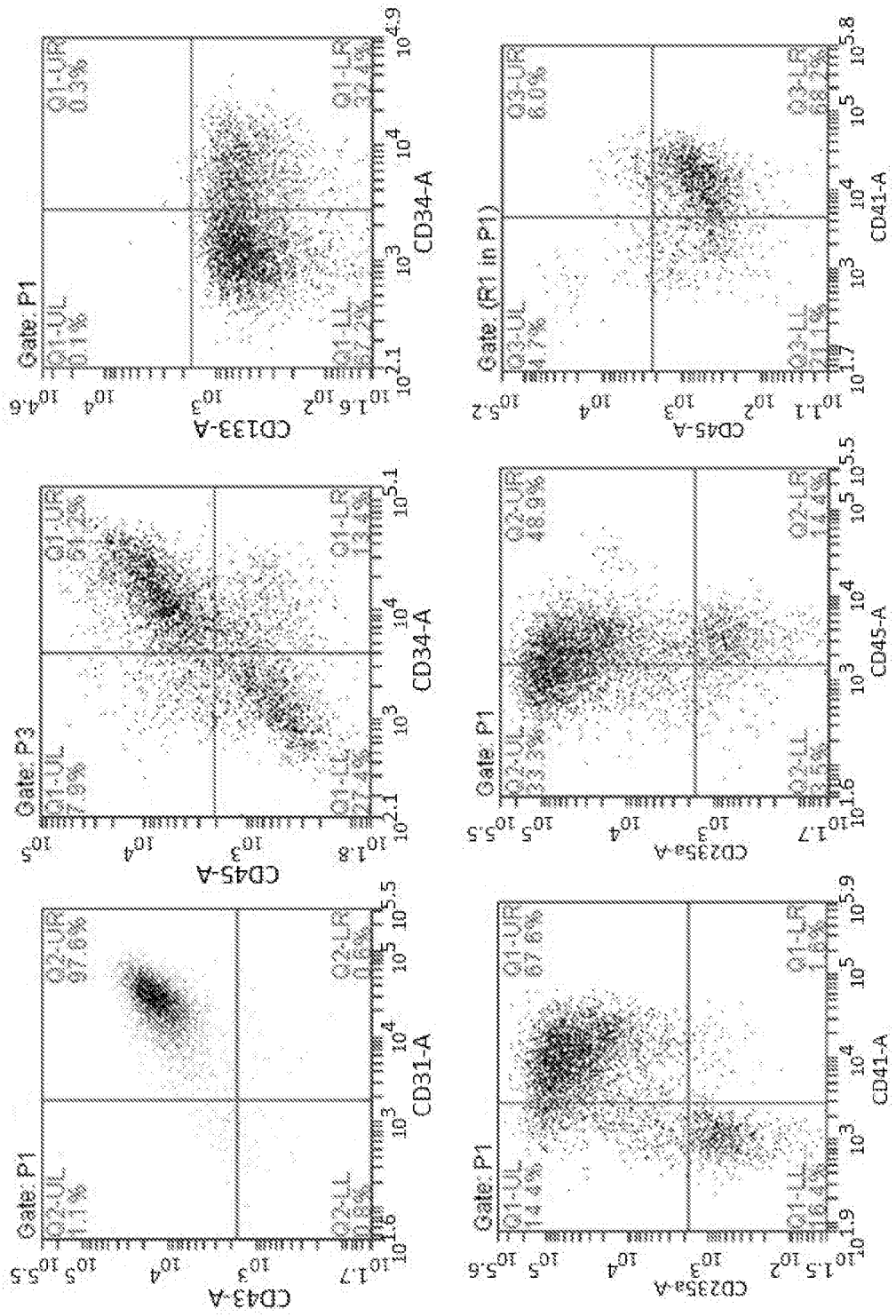
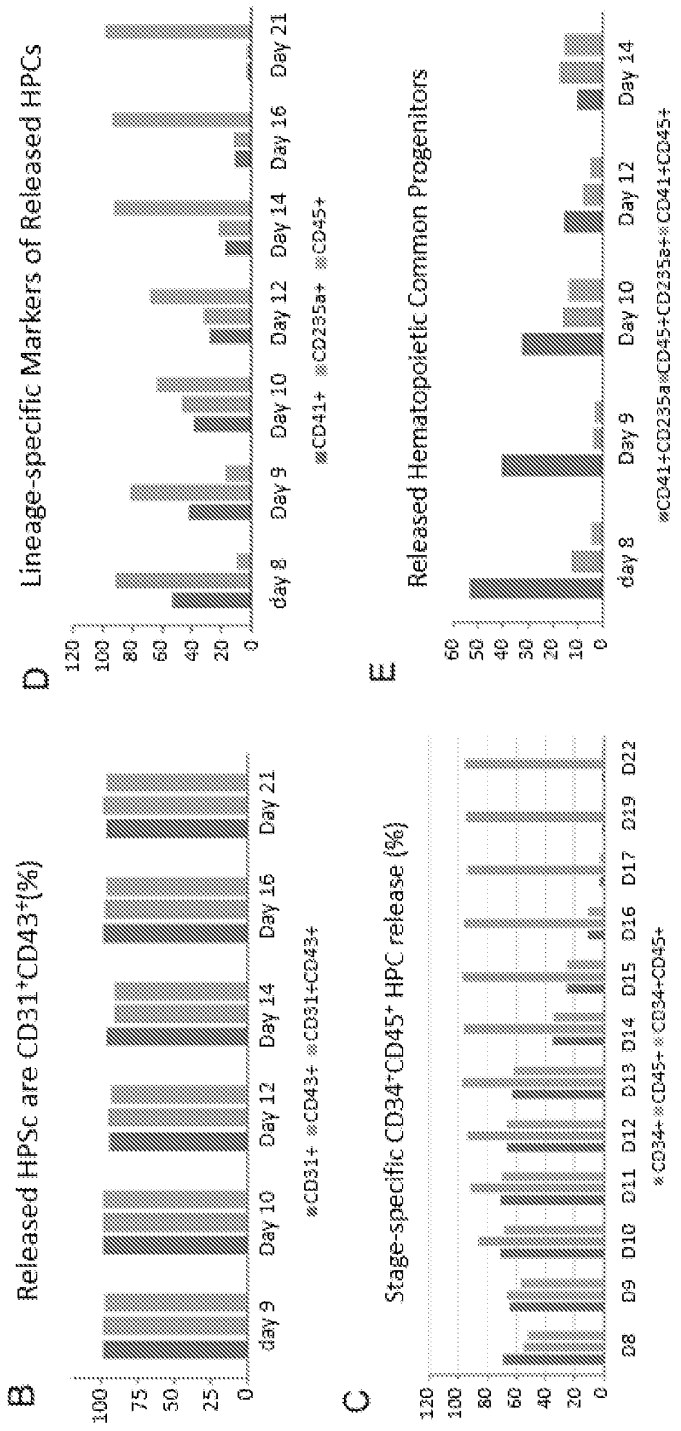
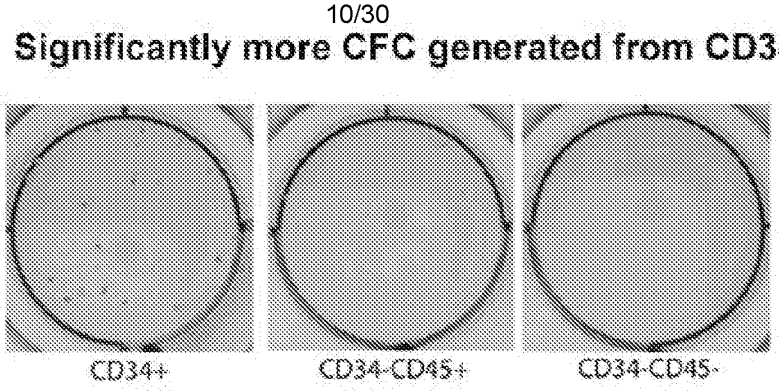

Gate: P1
Q1-UR 0.3%
Q1-UL 0.1%
Q1-LR 99.6%
Q1-LL 0.0%
CD133-A
CD34-A
Gate: (R1 in P1)
Q3-UR 6.0%
Q3-UL 4.7%
Q3-LR 89.2%
Q3-LL 0.1%
CD45-A
CD41-A
Gate: P3
Q1-UR 61.2%
Q1-UL 7.8%
Q1-LR 13.4%
Q1-LL 27.4%
CD45-A
CD34-A
Gate: P1
Q2-UR 48.0%
Q2-UL 33.3%
Q2-LR 14.4%
Q2-LL 4.3%
CD235a-A
CD45-A
Gate: P1
Q2-UR 97.6%
Q2-UL 1.1%
Q2-LR 0.6%
Q2-LL 0.8%
CD43-A
CD31-A
Gate: P1
Q1-UR 87.6%
Q1-UL 14.4%
Q1-LR 1.0%
Q1-LL 0.4%
CD235a-A
CD41-A

Figure 8A

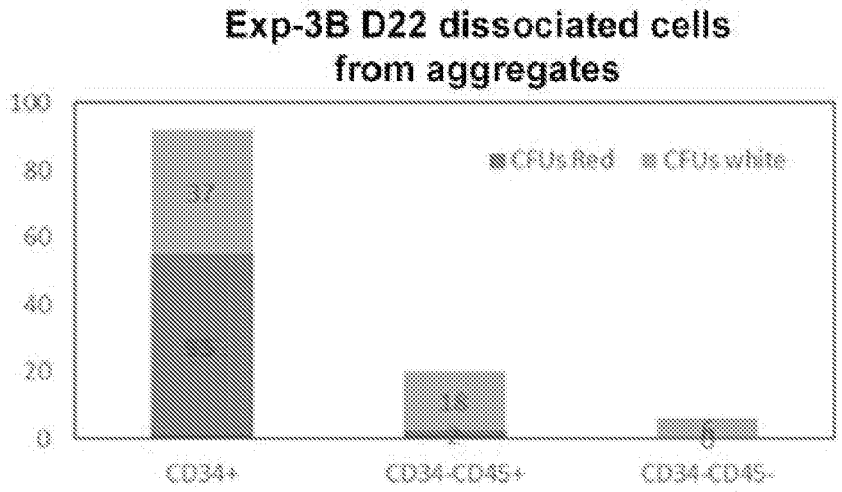



**Figures 8B-8E**

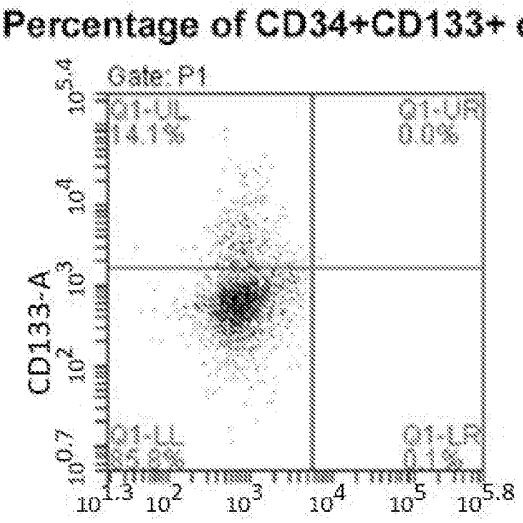
A




B

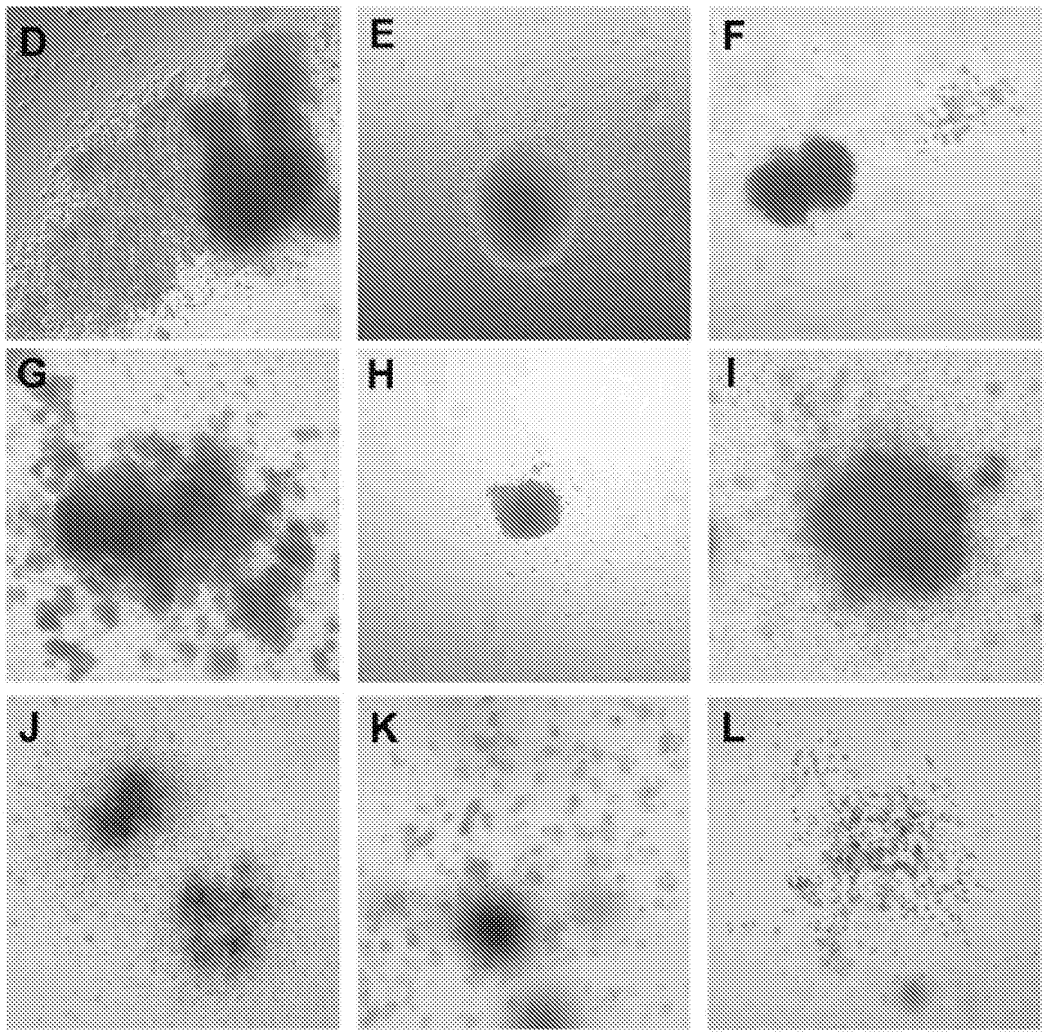



C




Figures 9A-9C

CFU morphology




Figures 9D-9L

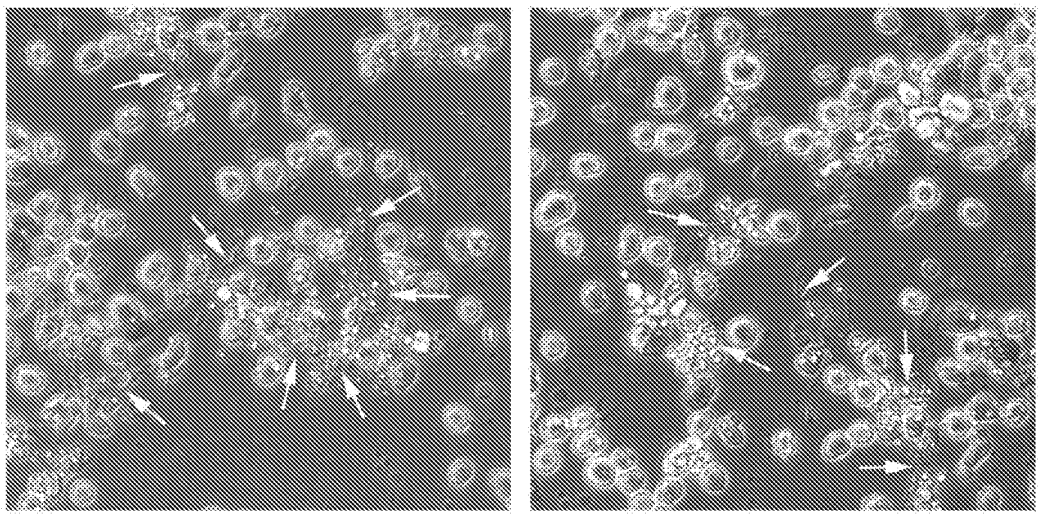


Figure 10A

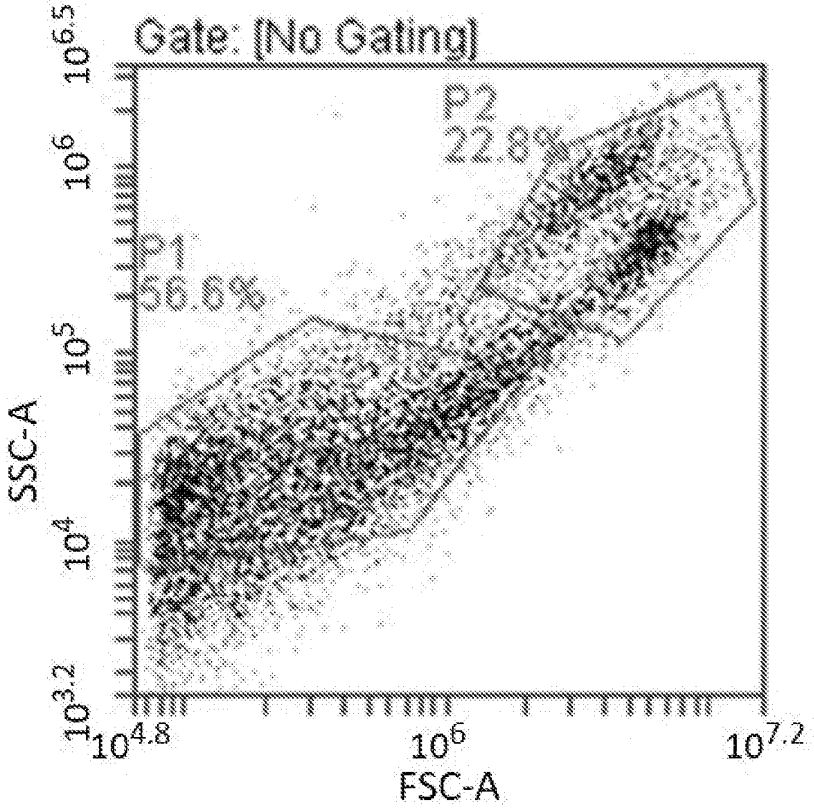



Figure 10B

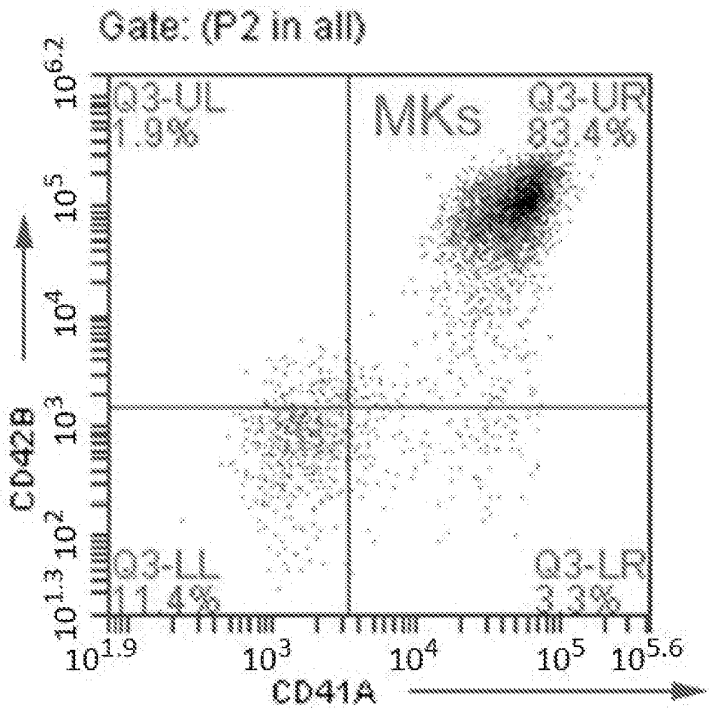



Figure 10C

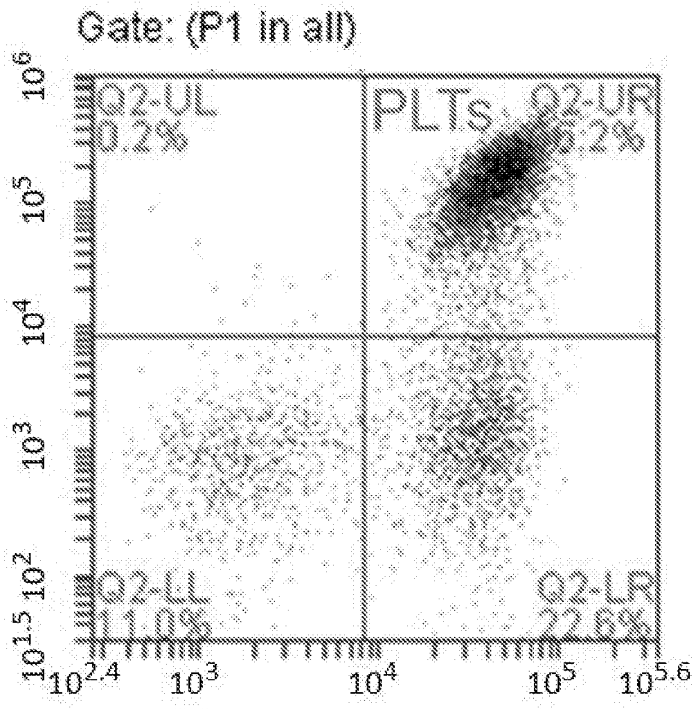



Figure 10D

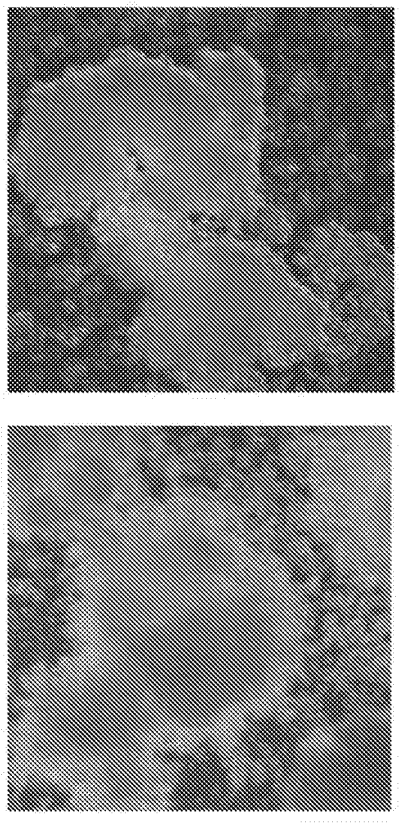


Figure 10E

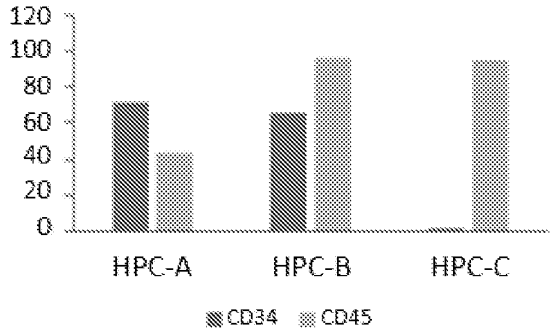



Figure 11A

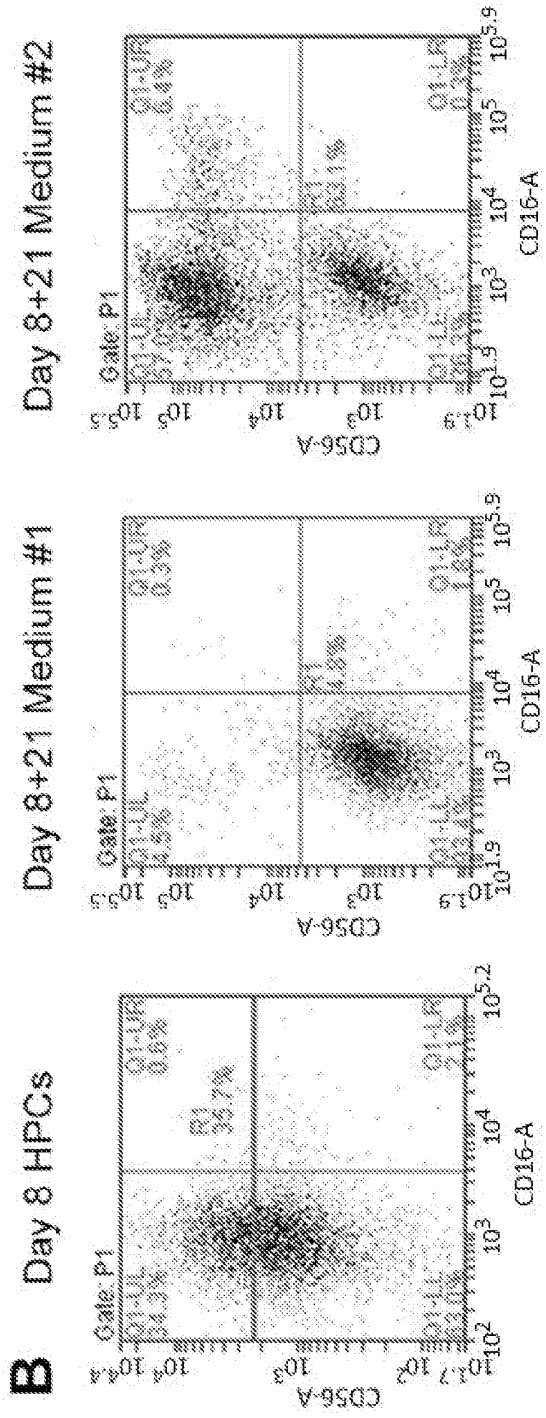

B
Day 8 HPCs
Day 8+21 Medium #1
Day 8+21 Medium #2
Gate: P1
CD56-A
CD16-A
Q1-UR
Q1-UL
Q1-LR
Q1-LL
R1

Figure 11B

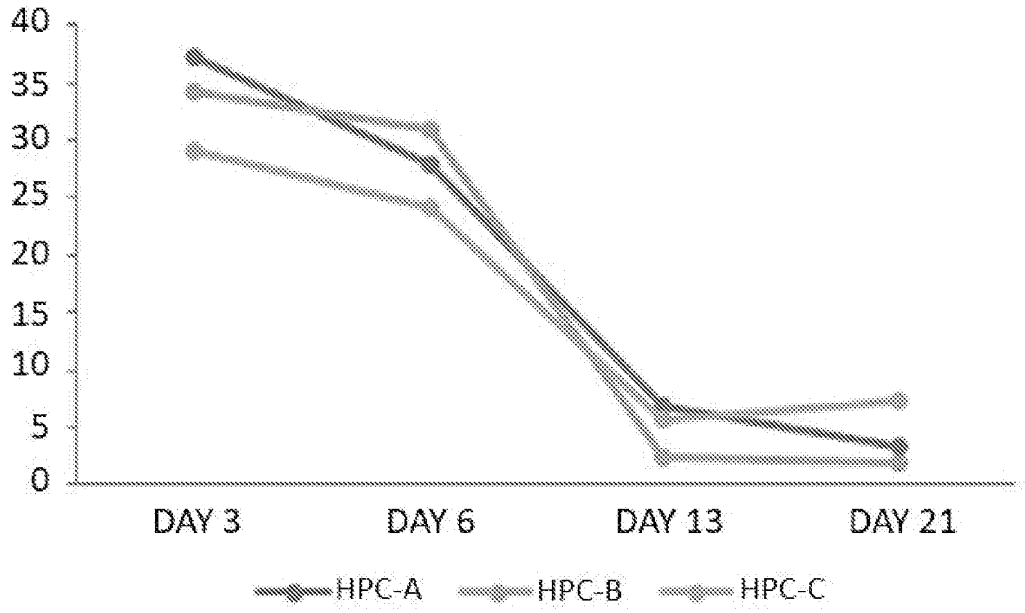



Figure 11C

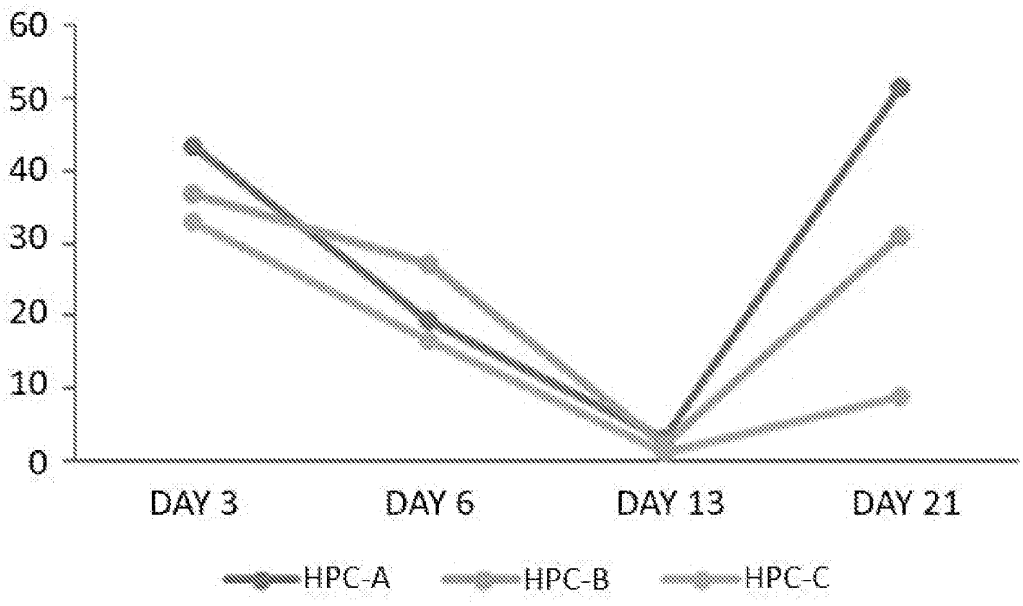
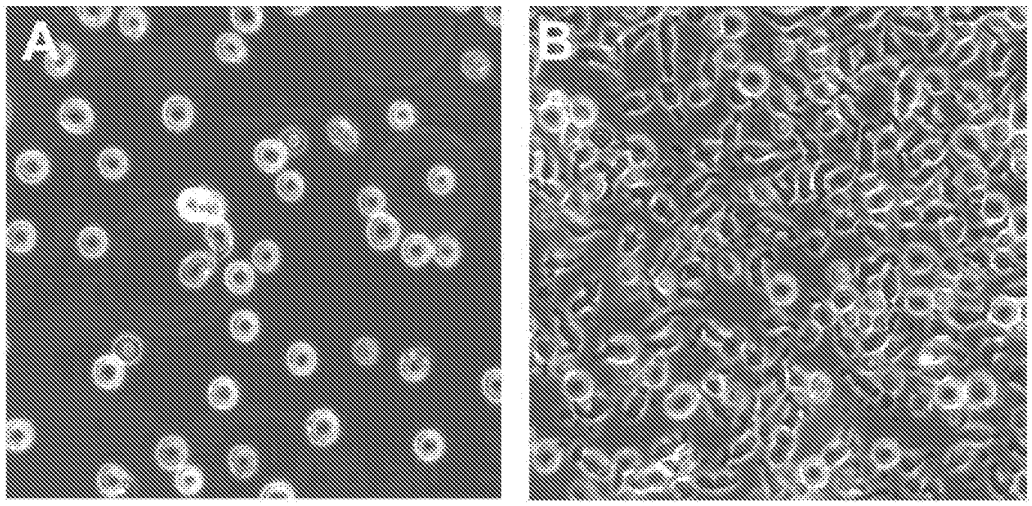



Figure 11D




Figures 12A-12B

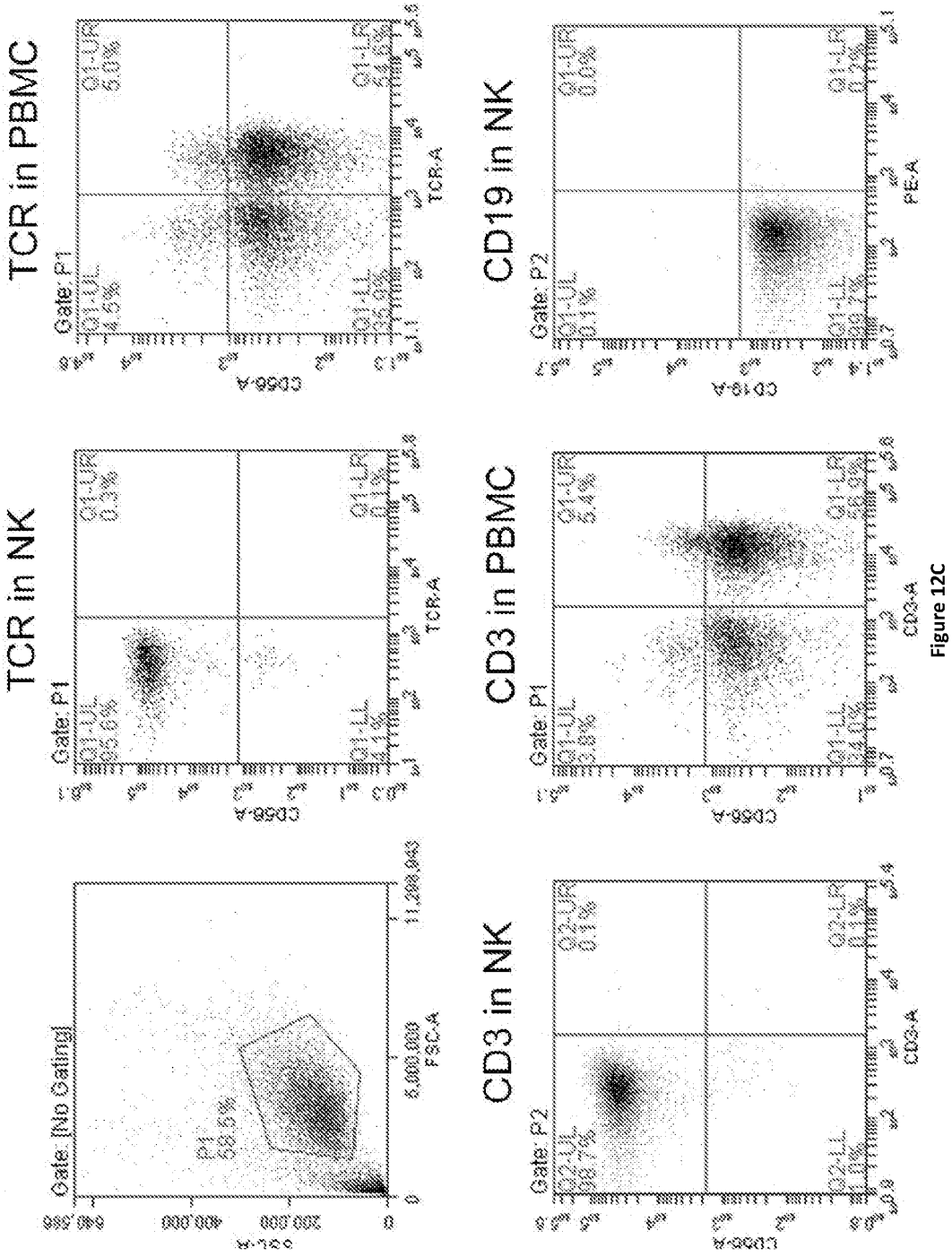

TCR in PBMC
Gate: P1
Q1-UR
6.0%
Q1-UL
14.6%
Q1-LL
79.0%
Q1-LR
0.4%
CD56-A
TCR-A
CD19 in NK
Gate: P2
Q1-UR
0.0%
Q1-UL
0.1%
Q1-LL
99.7%
Q1-LR
0.2%
CD19-A
PE-A
TCR in NK
Gate: P1
Q1-UR
0.3%
Q1-UL
85.6%
Q1-LL
13.1%
Q1-LR
0.1%
CD56-A
TCR-A
CD3 in PBMC
Gate: P1
Q1-UR
2.4%
Q1-UL
33.8%
Q1-LL
64.0%
Q1-LR
59.8%
CD56-A
CD3-A
Gate [No Gating]
P1
58.5%
FSC-A
CD3 in NK
Gate: P2
Q2-UR
0.1%
Q2-UL
98.7%
Q2-LL
1.0%
Q2-LR
0.1%
CD56-A
CD3-A

Figure 12C

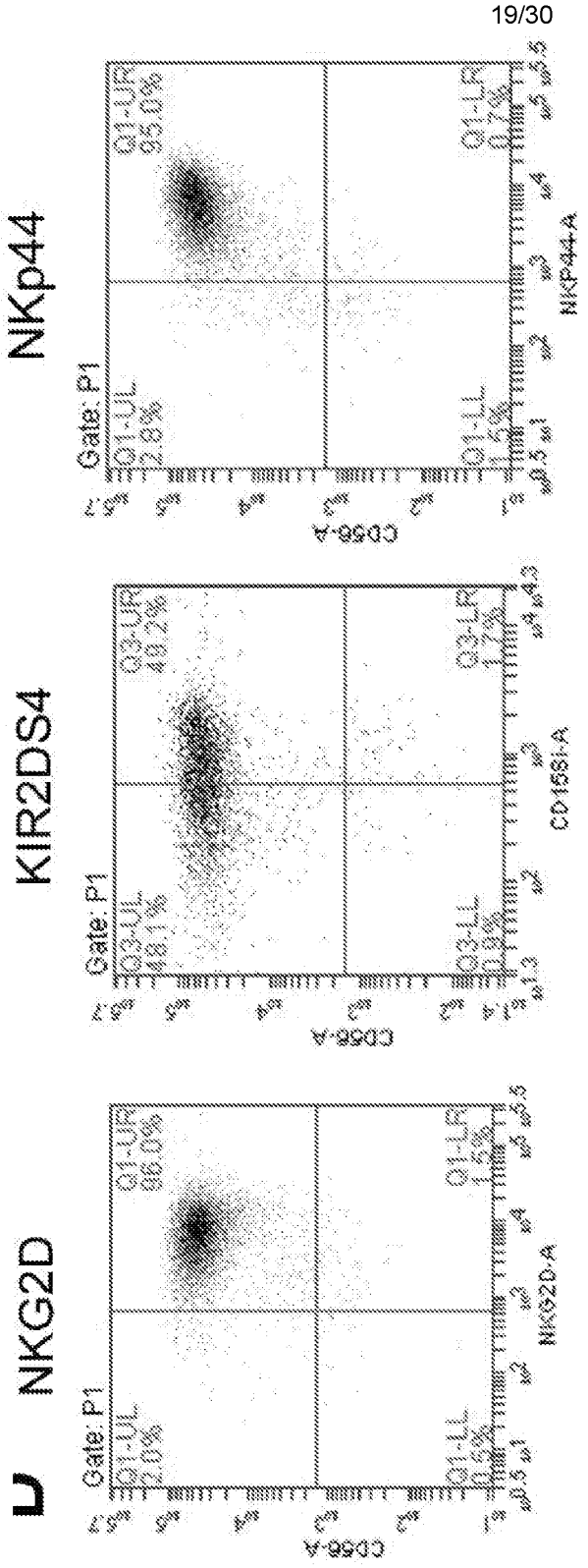

NKp44
Gate: P1
Q1-UR
95.0%
Q1-LR
0.7%
Q1-UL
12.8%
Q1-LL
1.4%
CD56-A
NKP44-A
KIR2DS4
Gate: P1
Q3-UR
40.2%
Q3-LR
1.7%
Q3-UL
48.1%
Q3-LL
0.0%
CD56-A
CD158i-A
NKG2D
Gate: P1
Q1-UR
86.0%
Q1-LR
1.5%
Q1-UL
12.0%
Q1-LL
0.6%
CD56-A
NKG2D-A

Figure 12D

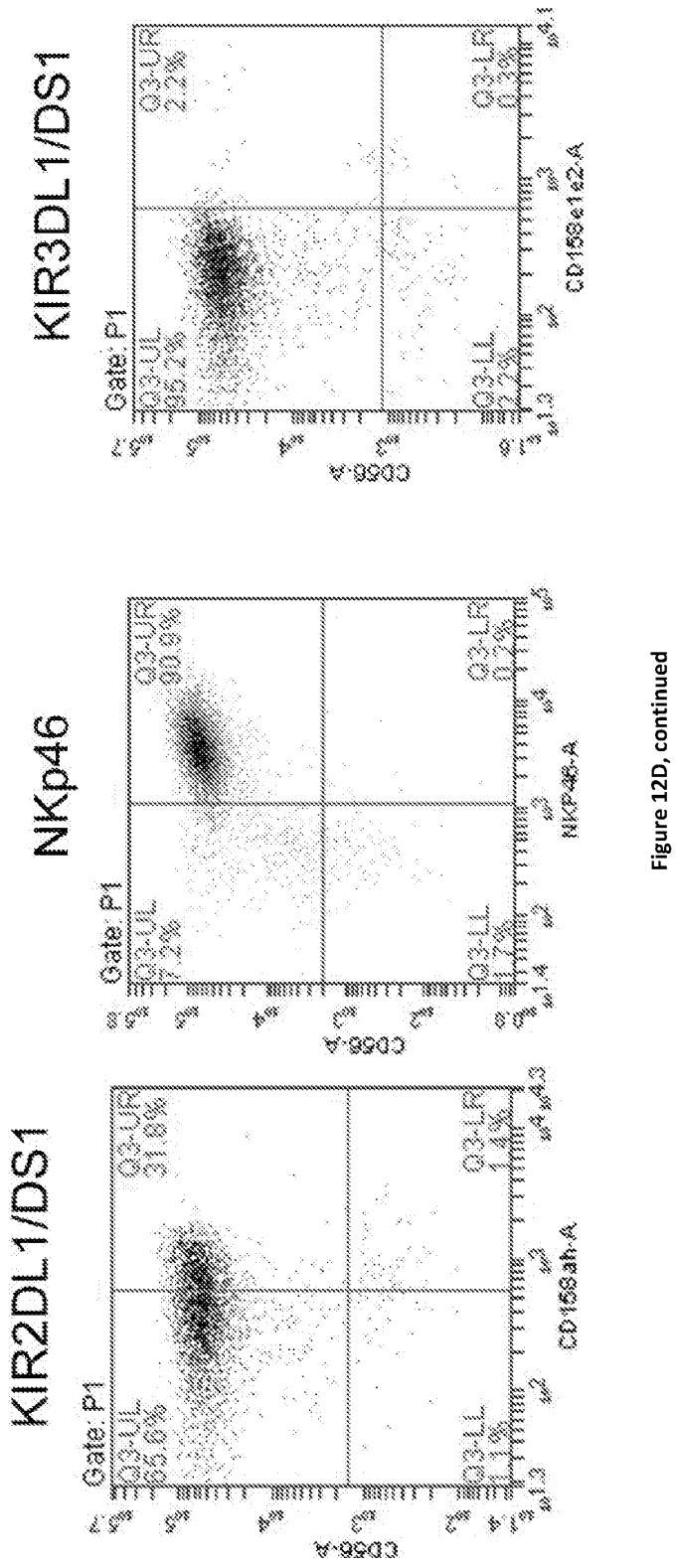



Figure 12D, continued

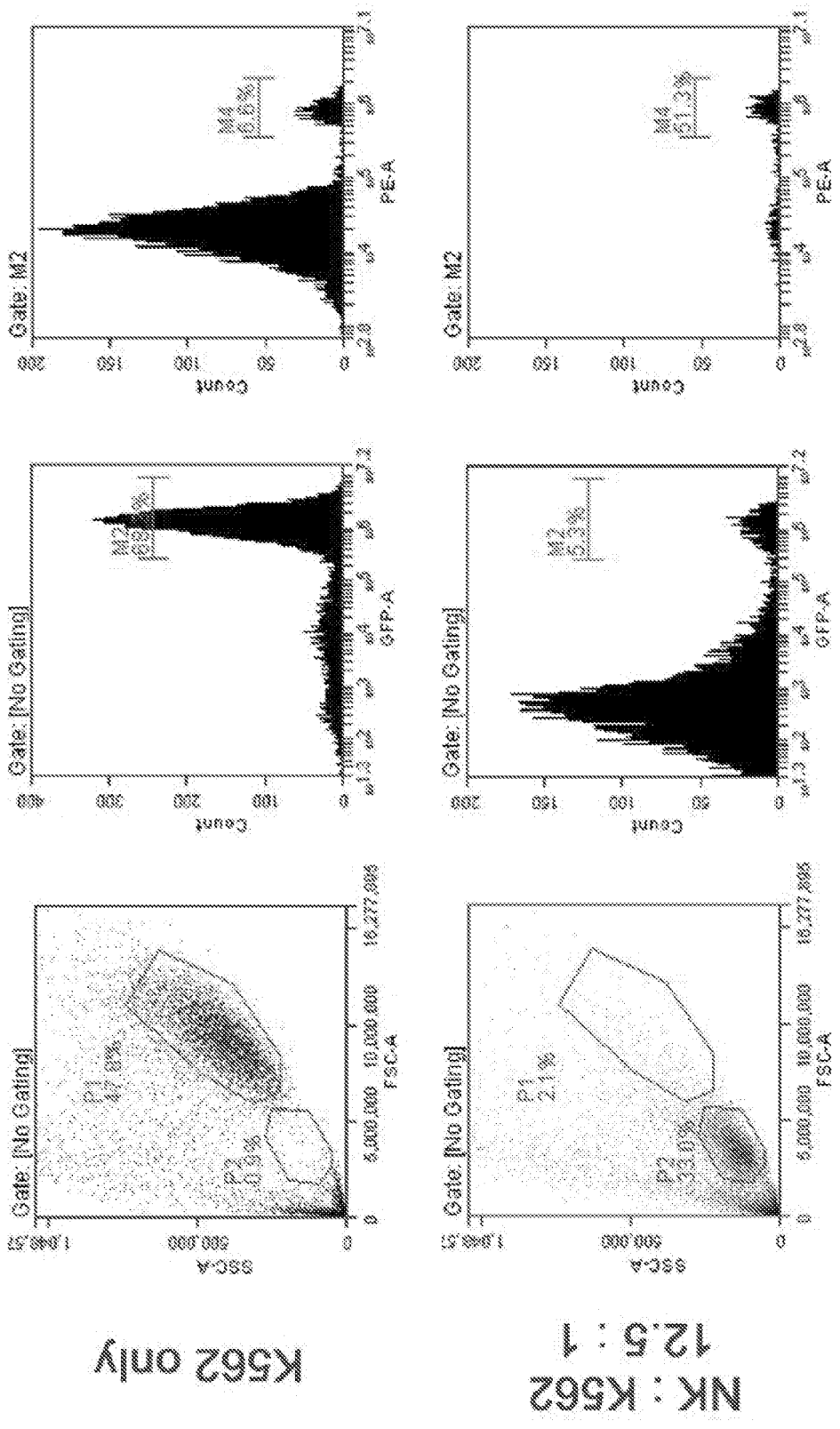

NK : K562
12.5 : 1
K562 only
Gate: [No Gating]
P1
47.8%
P2
0.3%
P1
21%
P2
23.0%
FSC-A
SSC-A
Gate: M2
M4
0.6%
M4
61.3%
PE-A
Count
Gate: [No Gating]
M2
69.2%
M2
6.3%
GFP-A
Count

Figure 13

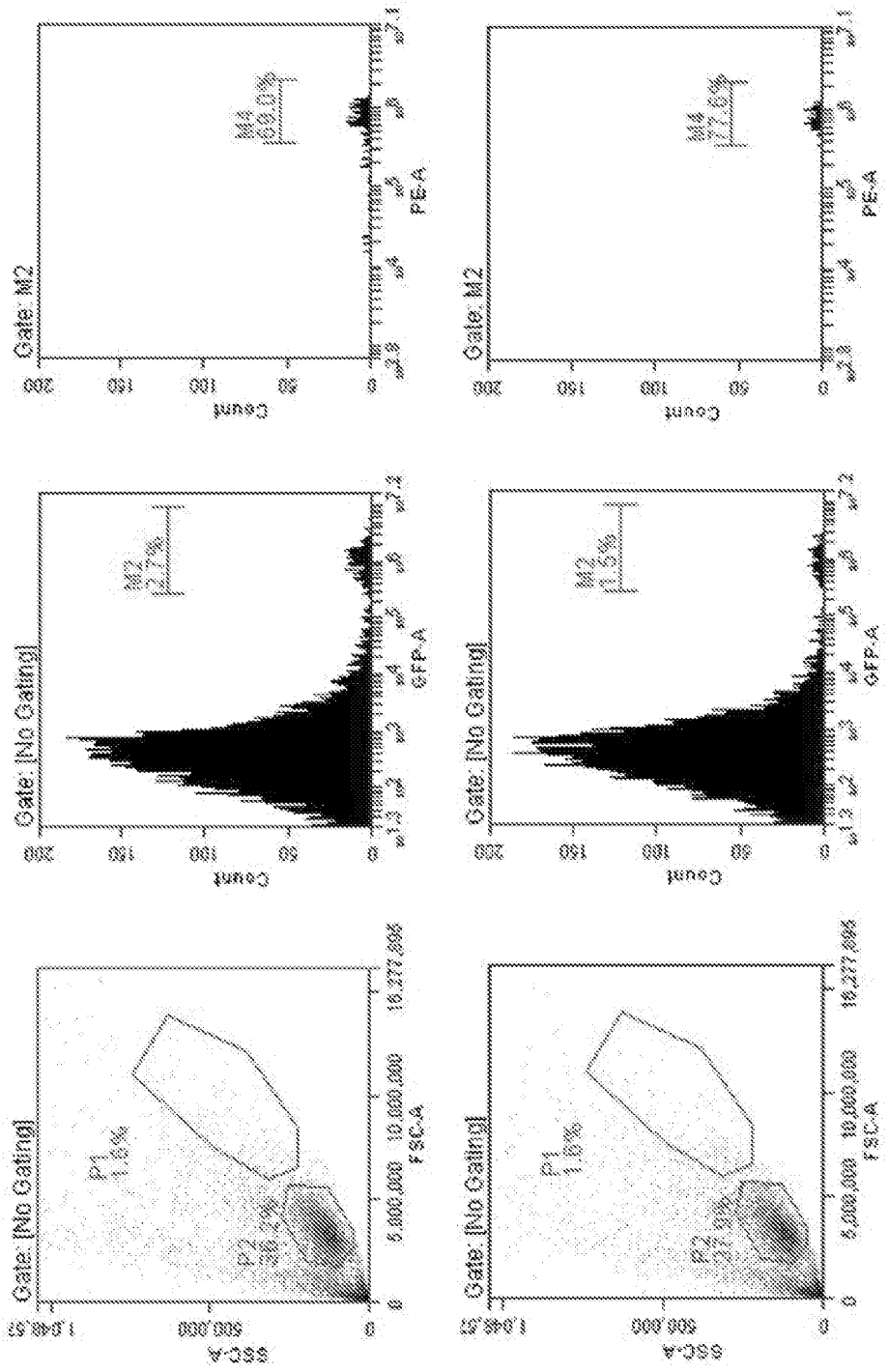



Figure 13, continued

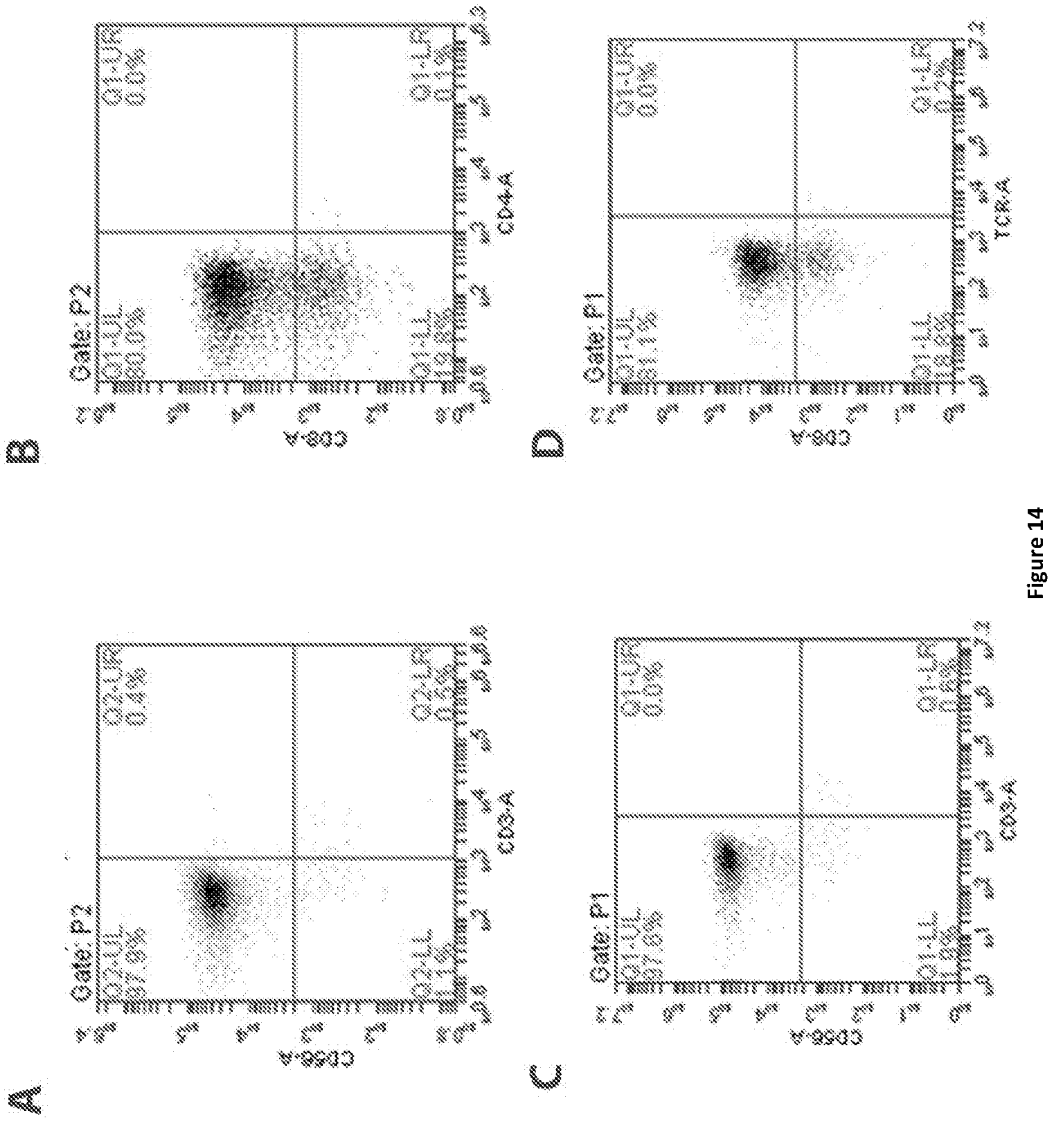
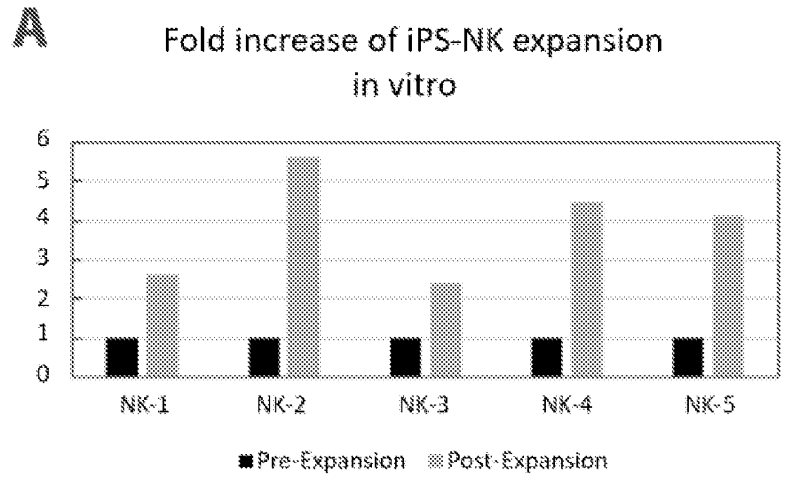
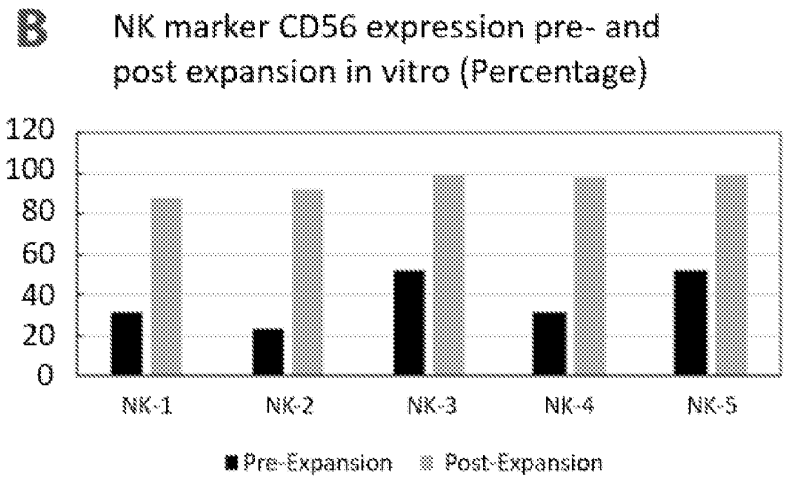

A
Gate: P2
Q2-UR
0.4%
Q2-LR
0.6%
Q2-UL
97.6%
Q2-LL
1.6%
CD56-A
CD3-A
B
Gate: P2
Q1-UR
0.0%
Q1-LR
0.1%
Q1-UL
80.0%
Q1-LL
19.8%
CD8-A
CD4-A
C
Gate: P1
Q1-UR
0.0%
Q1-LR
0.0%
Q1-UL
97.6%
Q1-LL
2.4%
CD56-A
CD3-A
D
Gate: P1
Q1-UR
0.0%
Q1-LR
0.2%
Q1-UL
81.1%
Q1-LL
18.6%
CD8-A
TCR-A

Figure 14

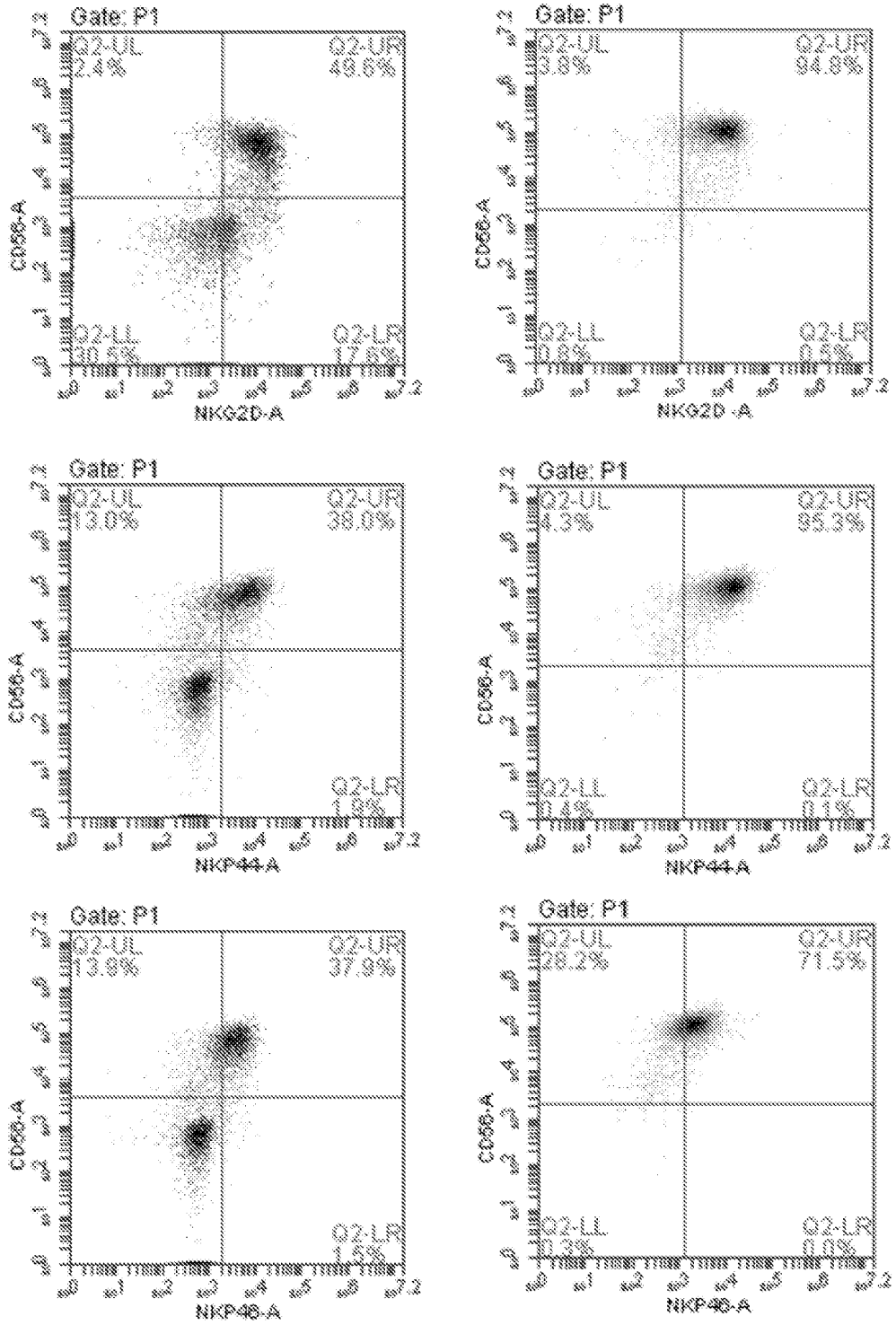



**Figures 15A-15B**

C Pre-expansion

D Post-expansion




Figures 15C-15D

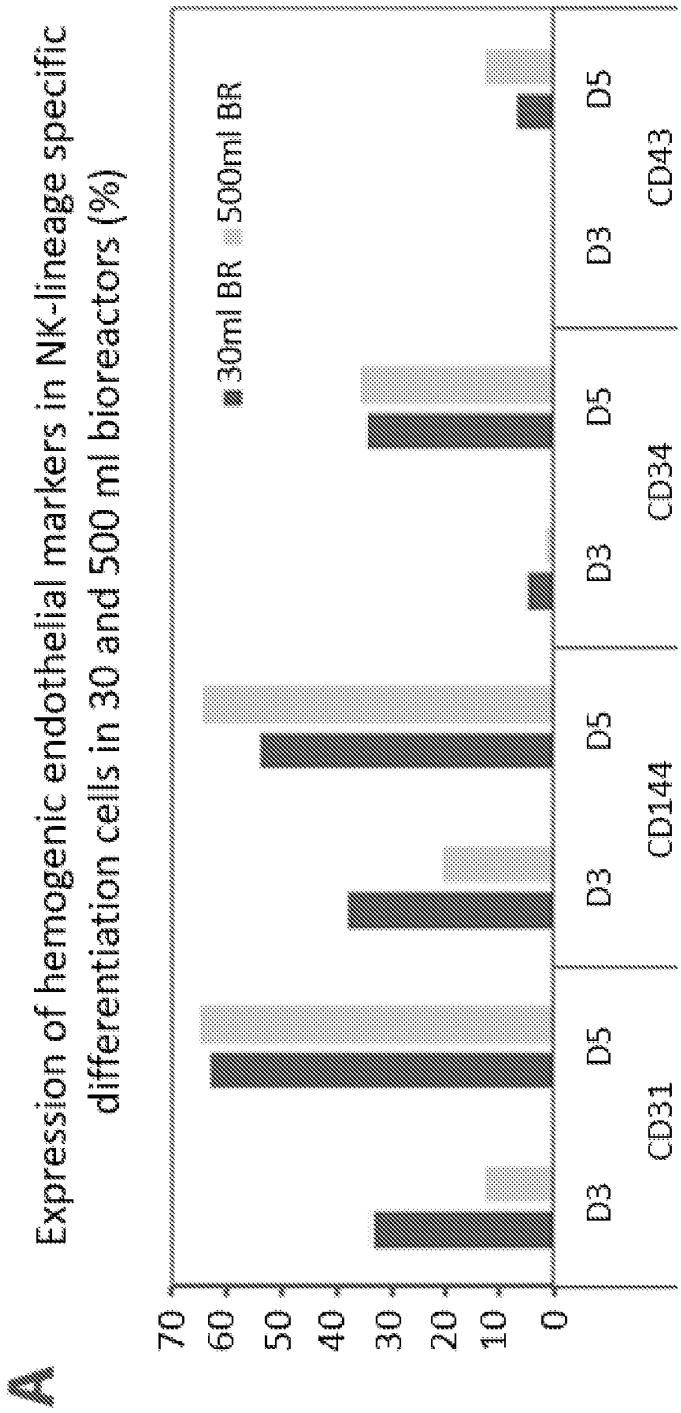

A
Expression of hemogenic endothelial markers in NK-lineage specific differentiation cells in 30 and 500 ml bioreactors (%)
30ml BR
500ml BR
70
60
50
40
30
20
10
0
D3
D5
CD31
D3
D5
CD144
D3
D5
CD34
D3
D5
CD43

Figure 16A

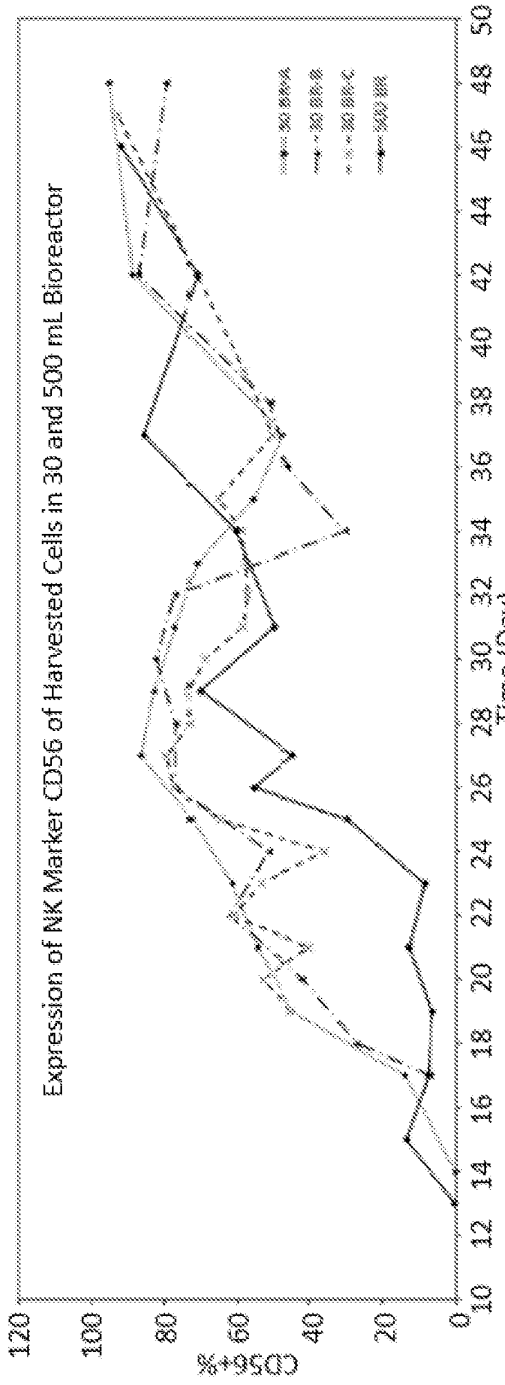
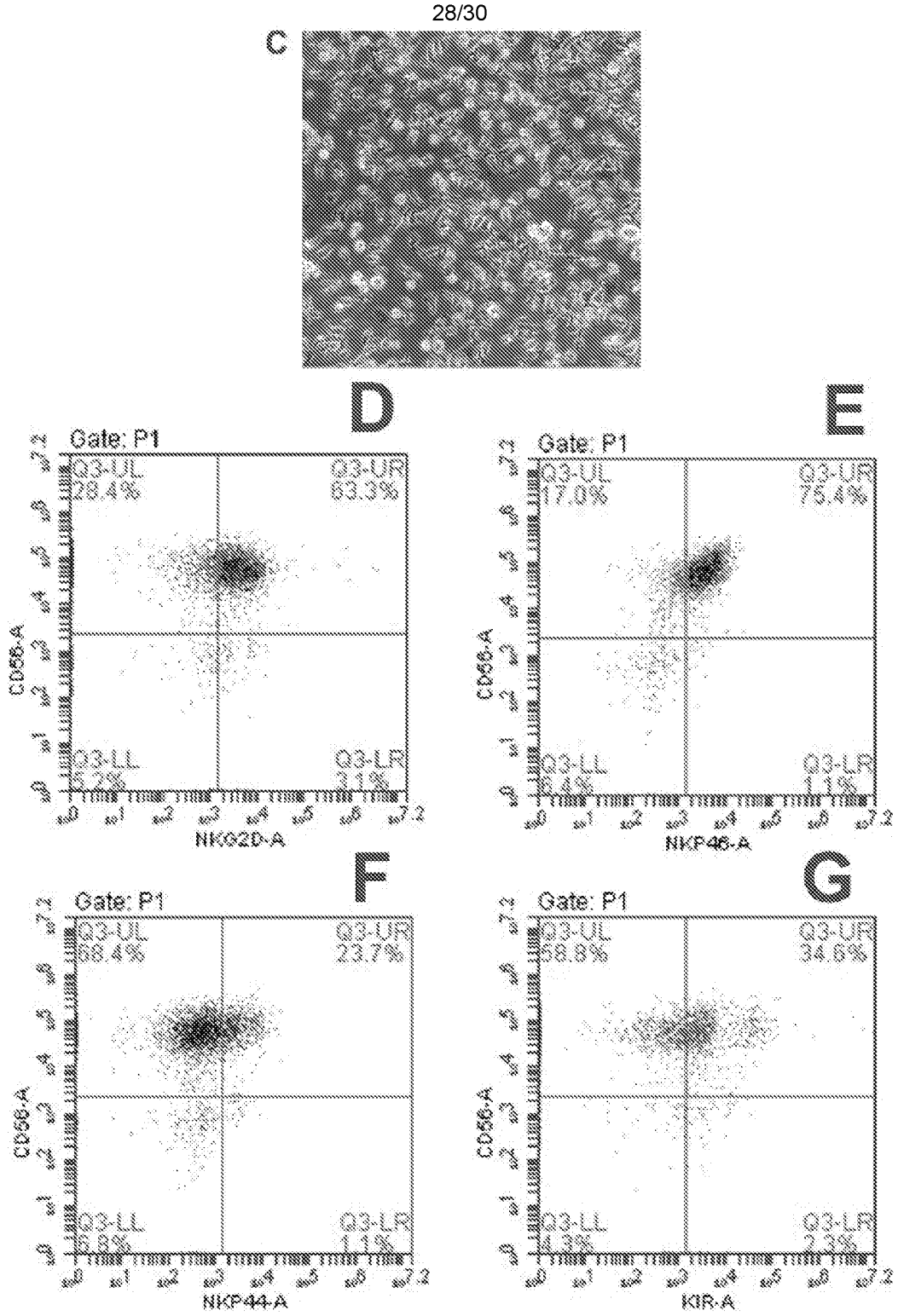

Expression of NK Marker CD56 of Harvested Cells in 30 and 500 mL Bioreactor
CD56+%
Time (Day)
0
20
40
60
80
100
120
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
40
42
44
45
48
50

Figure 16B




Figures 16C-16G

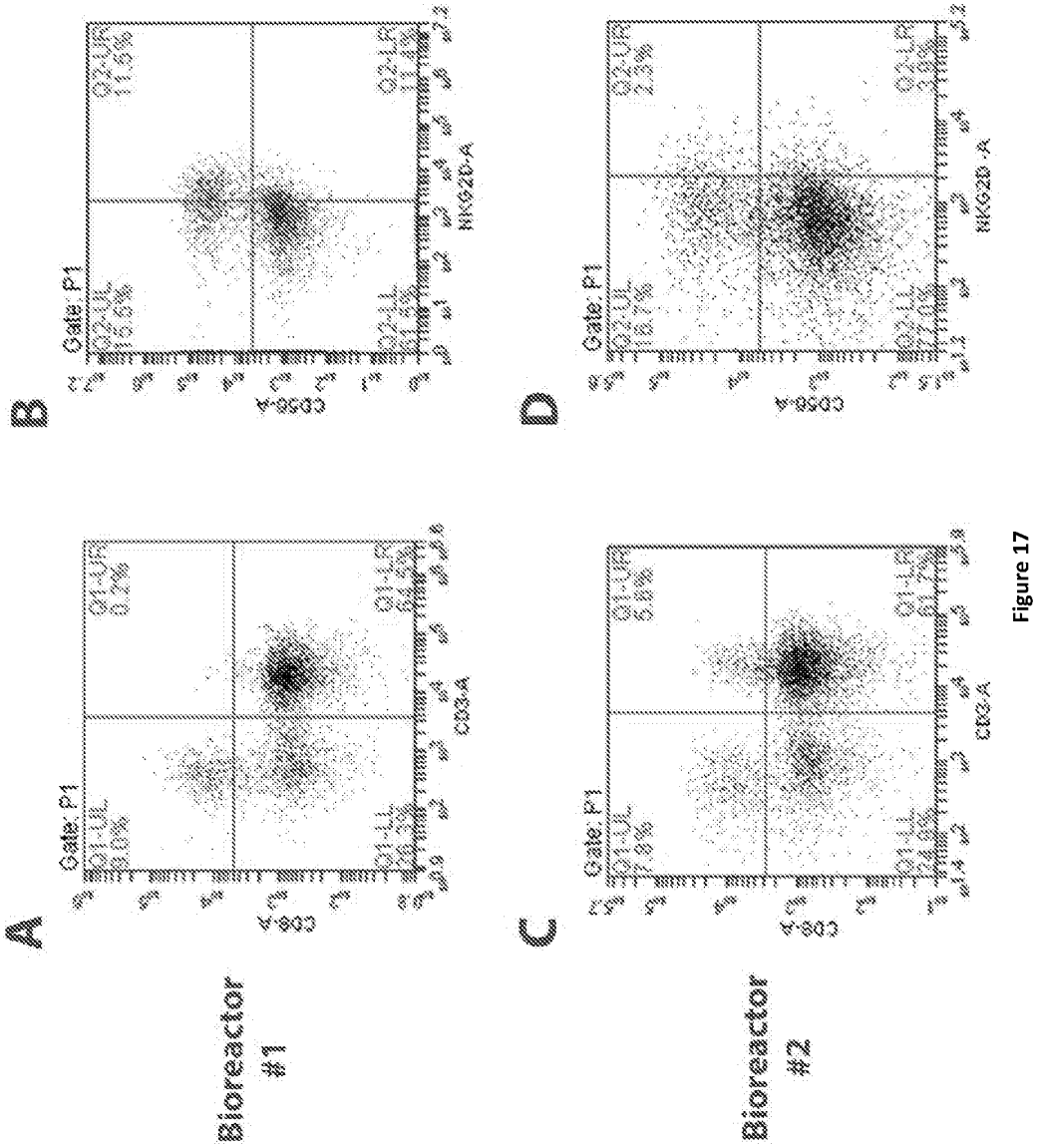

A
Gate: P1
Q1-UR
0.2%
Q1-UL
0.0%
Q1-LL
CD8-A
CD3-A
B
Gate: P1
Q2-UR
11.6%
Q2-UL
15.6%
Q2-LR
CD56-A
NKG2D-A
C
Gate: P1
Q1-UR
6.6%
Q1-UL
1.8%
Q1-LR
CD8-A
CD3-A
D
Gate: P1
Q2-UR
2.3%
Q2-UL
19.7%
Q2-LR
CD56-A
NKG2D-A
Bioreactor #1
Bioreactor #2

Figure 17

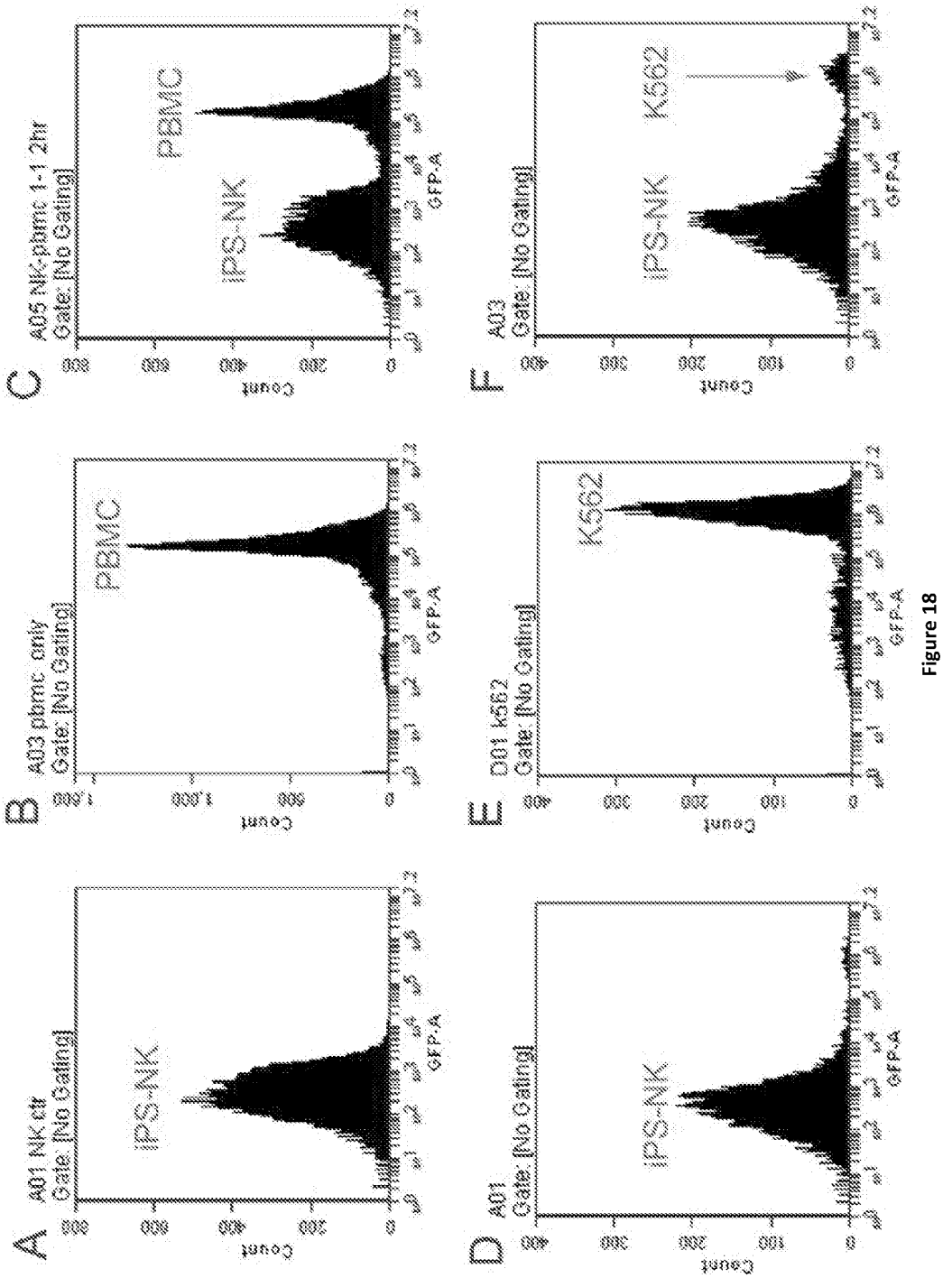

A
A01 NK ctr
Gate: [No Gating]
iPS-NK
Count
GFP-A
B
A03 pbmc only
Gate: [No Gating]
PBMC
C
A05 NK-pbmc 1-1 2hr
Gate: [No Gating]
iPS-NK
PBMC
D
A01
Gate: [No Gating]
iPS-NK
E
D01 k562
Gate: [No Gating]
K562
F
A03
Gate: [No Gating]
iPS-NK
K562

Figure 18