Fig. 1

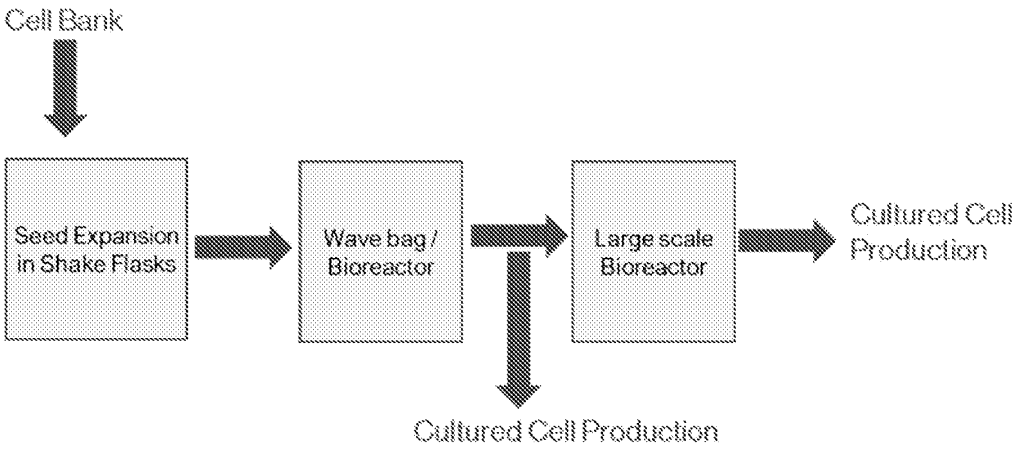
Cell Bank
Seed Expansion in Shake Flasks
Wave bag / Bioreactor
Large scale Bioreactor
Cultured Cell Production
Cultured Cell Production

Fig. 2

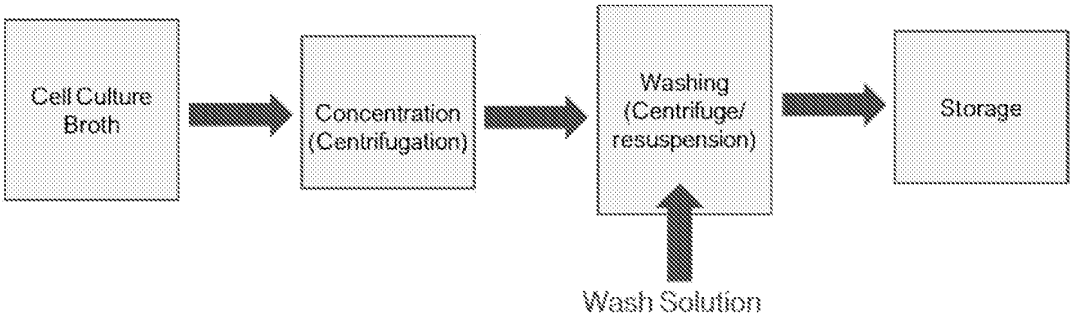
Cell Culture Broth
Concentration (Centrifugation)
Washing (Centrifuge/ resuspension)
Storage
Wash Solution

Fig. 3

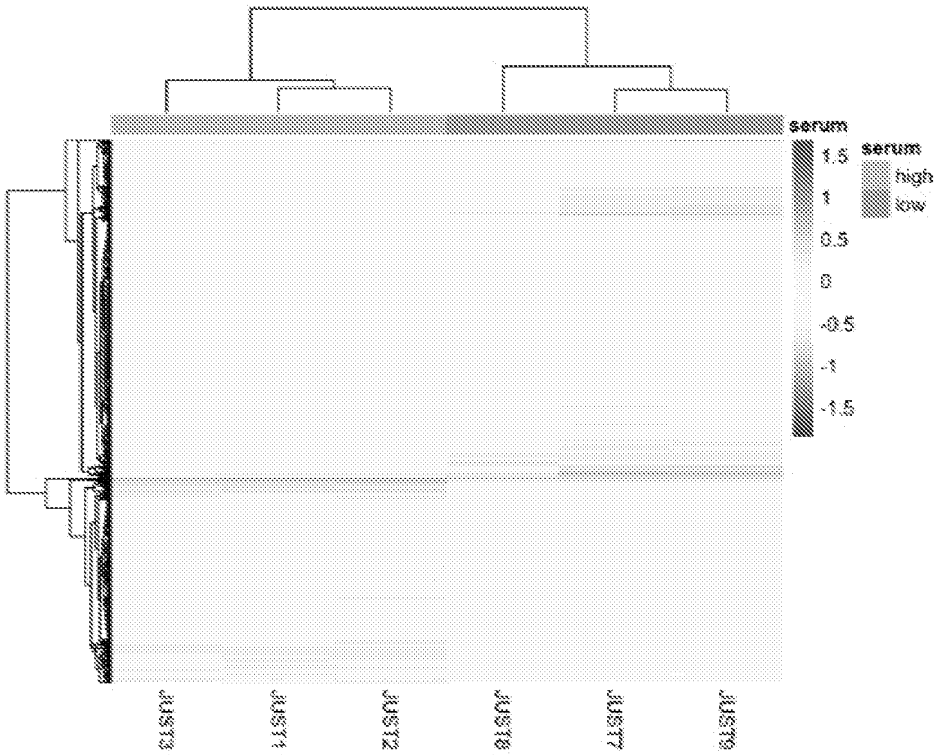
serum
serum
high
low
1.5
1
0.5
0
-0.5
-1
-1.5
JUST3
JUST1
JUST2
JUST10
JUST7
JUST6

Fig. 4A

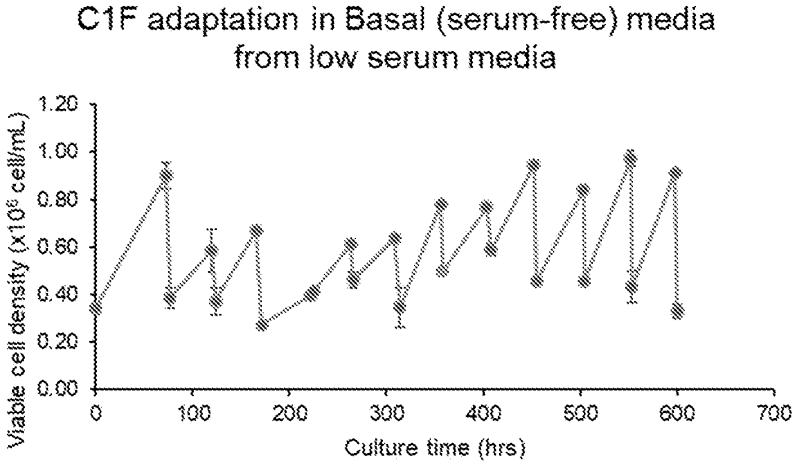
C1F adaptation in Basal (serum-free) media
from low serum media
Viable cell density (x10^6 cell/mL)
1.20
1.00
0.80
0.60
0.40
0.20
0.00
0
100
200
300
400
500
600
700
Culture time (hrs)

Fig. 4B

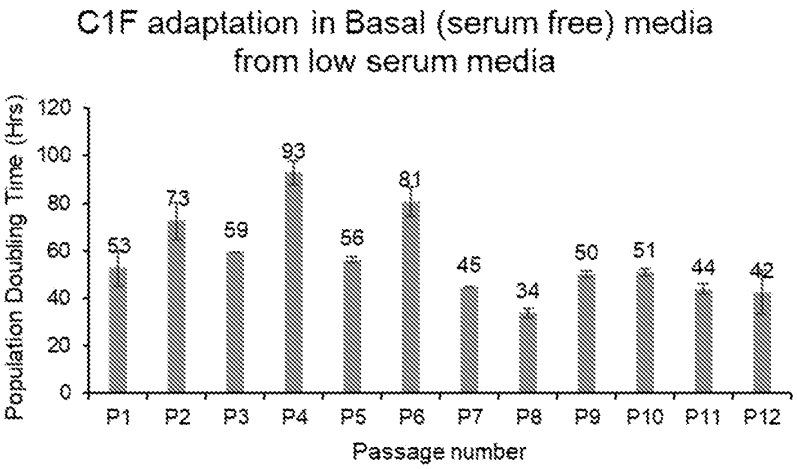
C1F adaptation in Basal (serum free) media
from low serum media
Population Doubling Time (Hrs)
120
100
80
60
40
20
0
53
73
59
93
56
81
45
34
50
51
44
42
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
P11
P12
Passage number

Fig. 5A

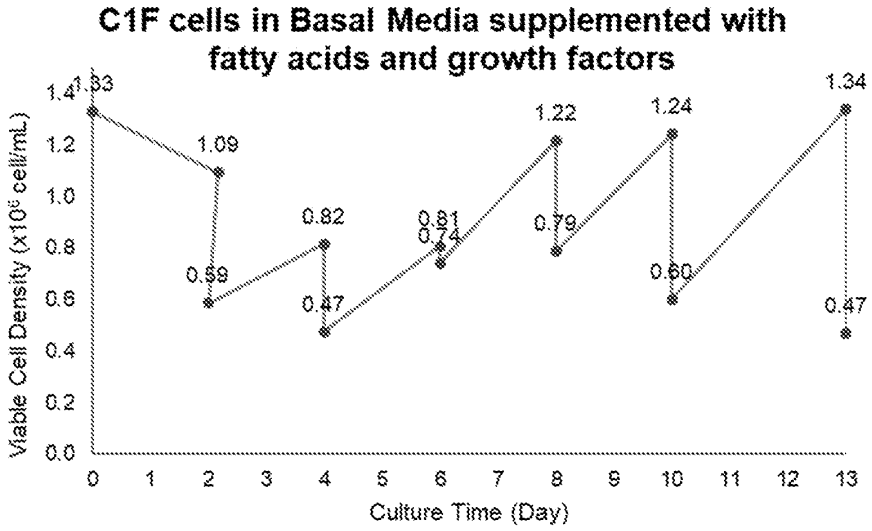
C1F cells in Basal Media supplemented with fatty acids and growth factors
Viable Cell Density (x10^6 cell/mL)
Culture Time (Day)
1.33
1.09
0.59
0.82
0.47
0.81
0.74
1.22
0.79
1.24
0.60
1.34
0.47

Fig. 5B

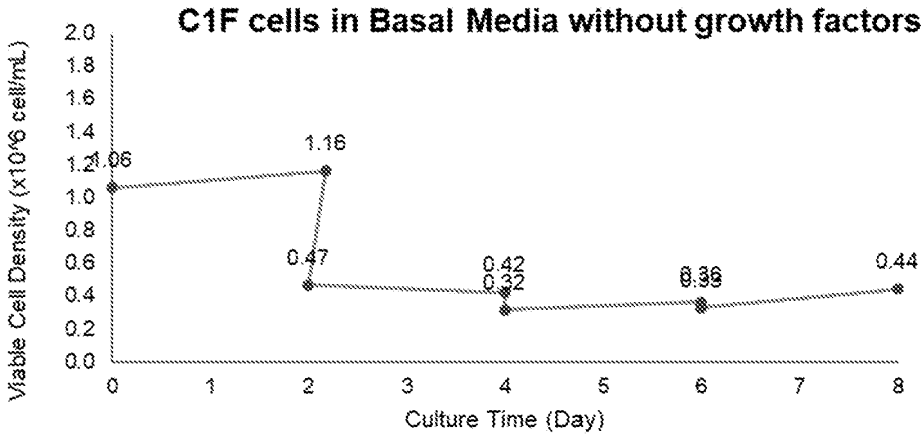
C1F cells in Basal Media without growth factors
Viable Cell Density (x10^6 cell/mL)
Culture Time (Day)
1.06
1.16
0.47
0.42
0.32
0.44

Fig. 5C

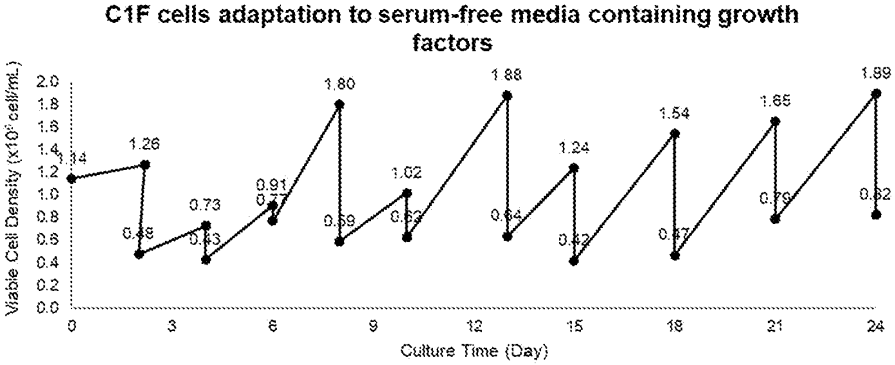
C1F cells adaptation to serum-free media containing growth factors
Viable Cell Density (X10⁶ cell/mL)
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
1.14
1.26
0.48
0.73
0.43
0.91
1.80
0.59
1.02
0.64
1.88
0.64
1.24
0.42
1.54
0.47
1.65
0.79
1.89
0.82
0
3
6
9
12
15
18
21
24
Culture Time (Day)

Fig. 6a, 6b, and 6c

