FIG. 1

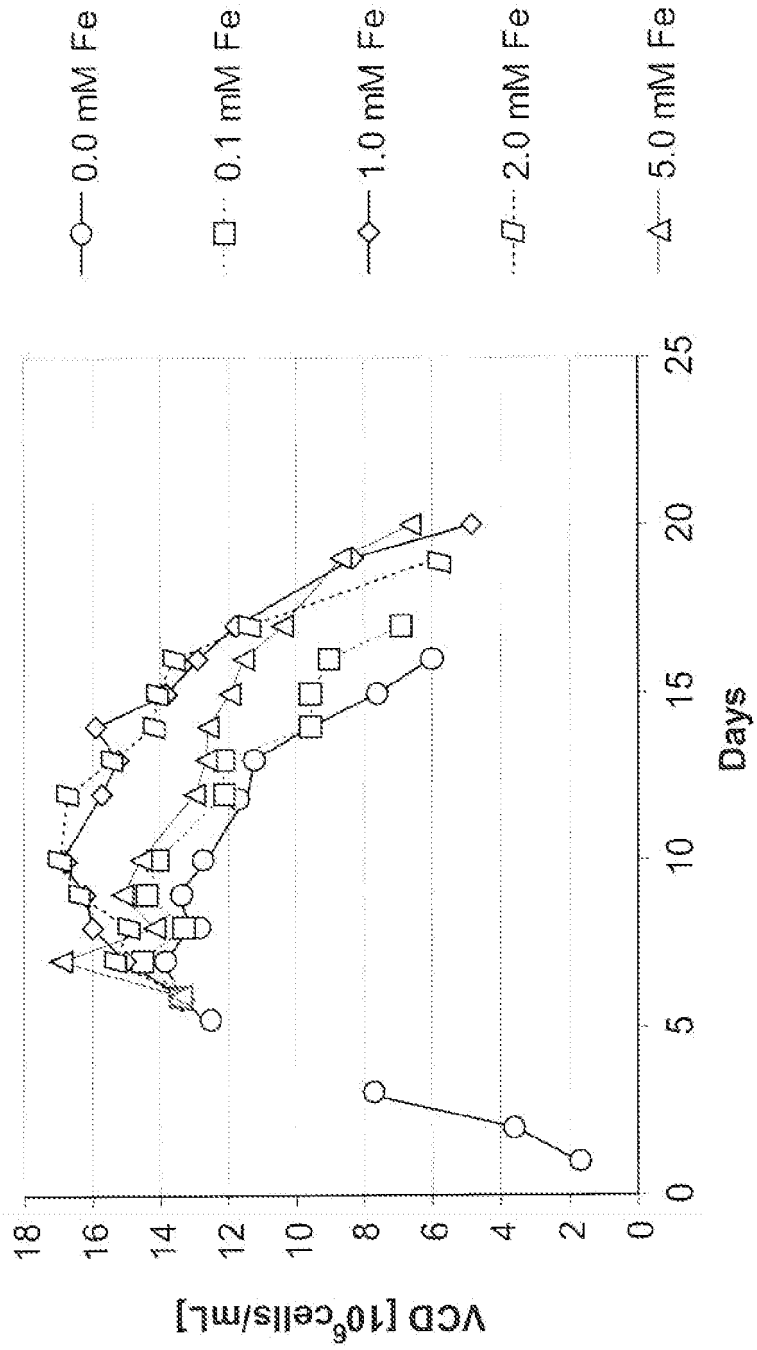

0.0 mM Fe
0.1 mM Fe
1.0 mM Fe
2.0 mM Fe
5.0 mM Fe
VCD [10^6 cells/mL]
Days
0
2
4
6
8
10
12
14
16
18
0
5
10
15
20
25

FIG. 2

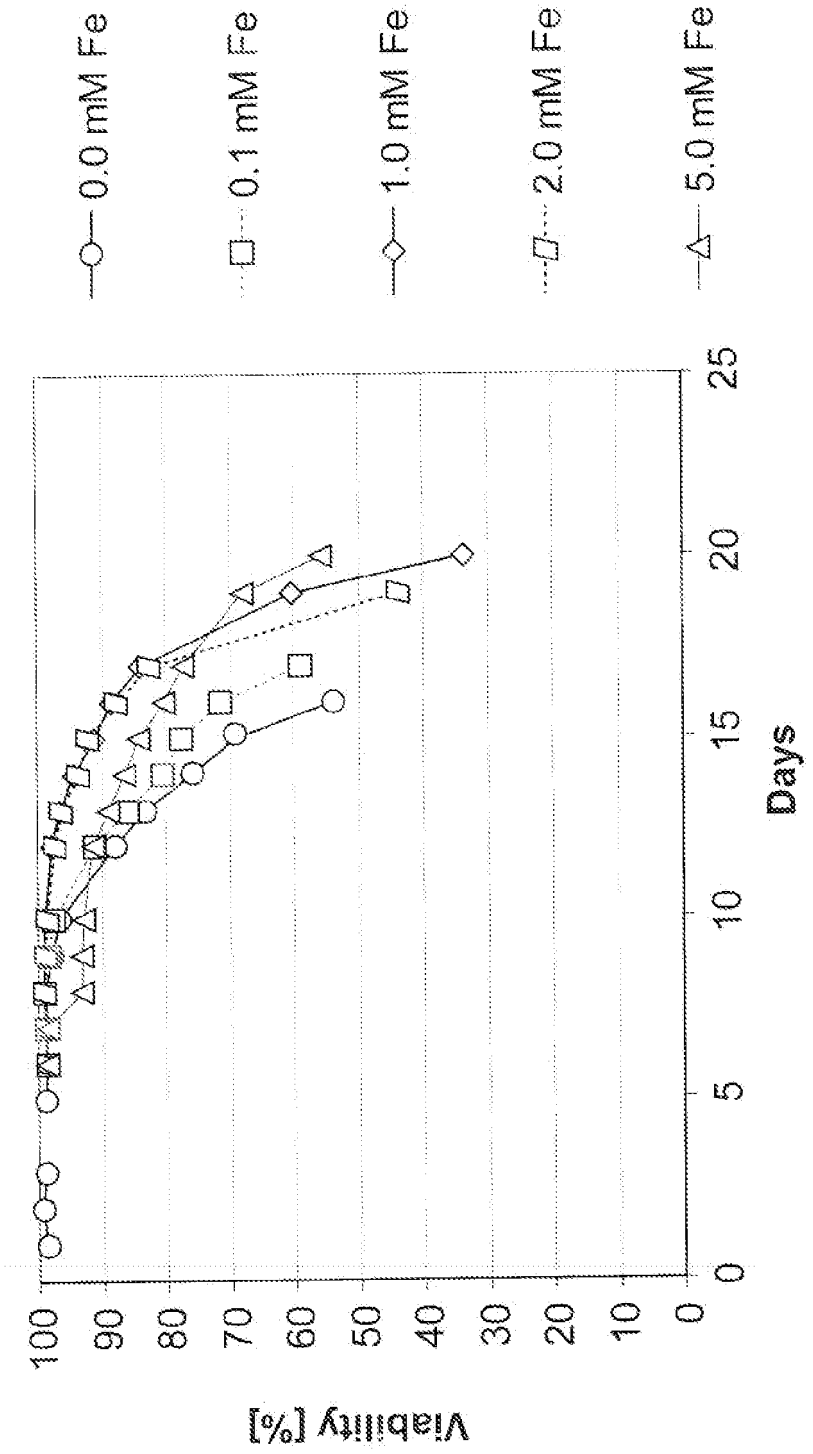

0.0 mM Fe
0.1 mM Fe
1.0 mM Fe
2.0 mM Fe
5.0 mM Fe
Viability [%]
100
90
80
70
60
50
40
30
20
10
0
0
5
10
15
20
25
Days

FIG. 3

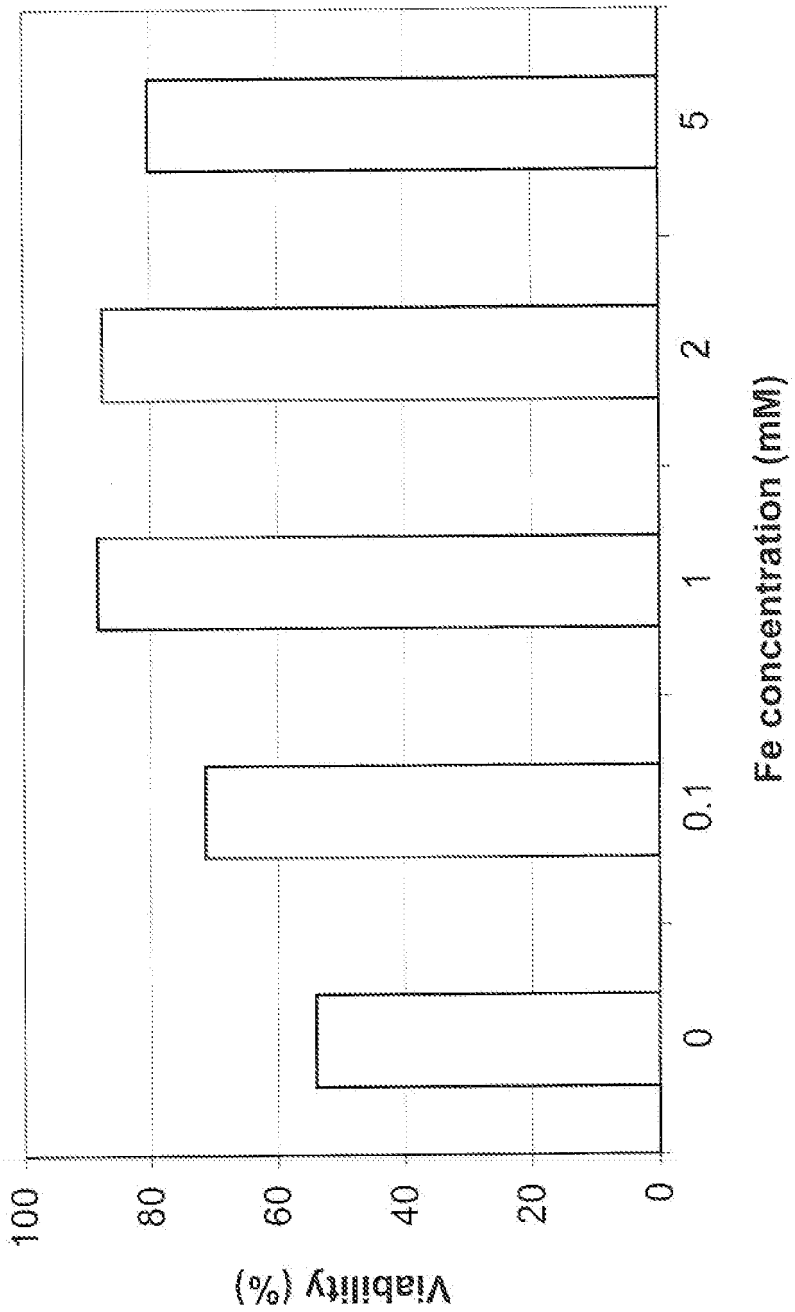


FIG. 4

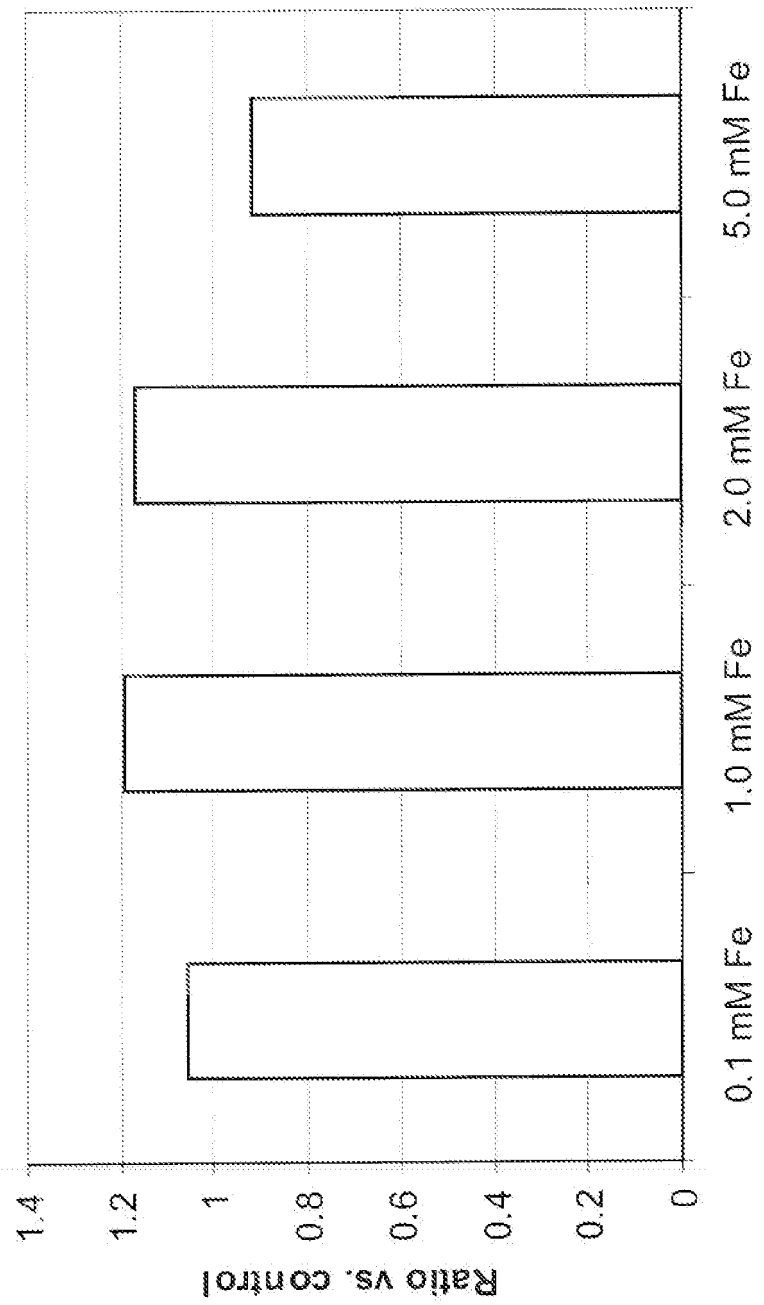

Ratio vs. control
1.4
1.2
1
0.8
0.6
0.4
0.2
0
0.1 mM Fe
1.0 mM Fe
2.0 mM Fe
5.0 mM Fe

FIG. 5

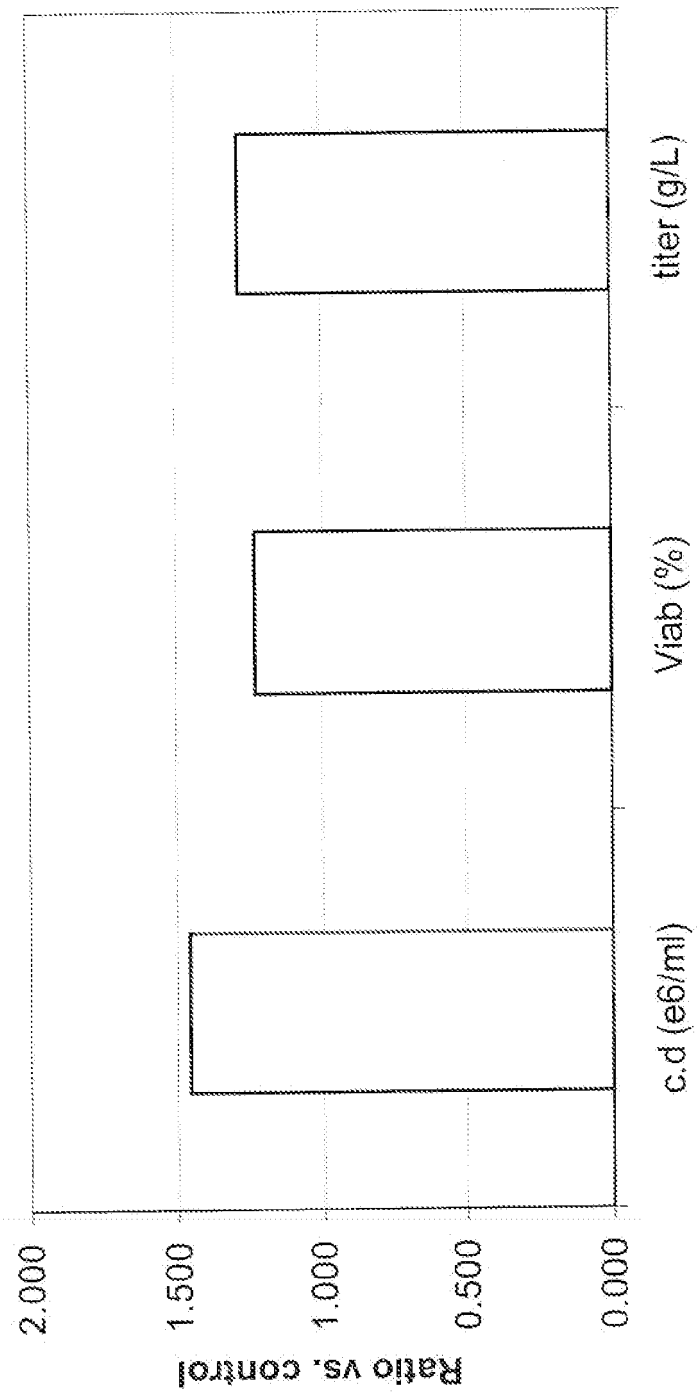

Ratio vs. control
2.000
1.500
1.000
0.500
0.000
c.d (e6/ml)
Viab (%)
titer (g/L)

FIG. 6

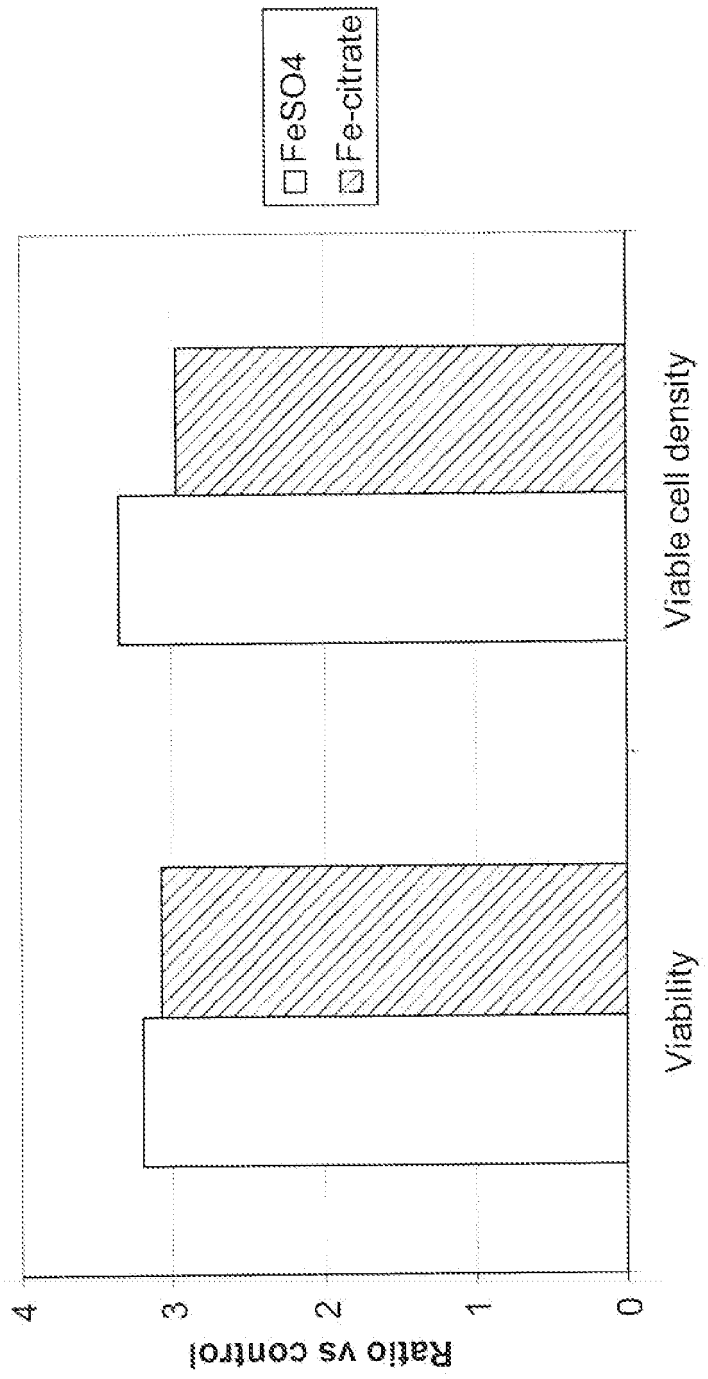

FeSO4
Fe-citrate
Ratio vs control
0
1
2
3
4
Viability
Viable cell density

FIG. 7

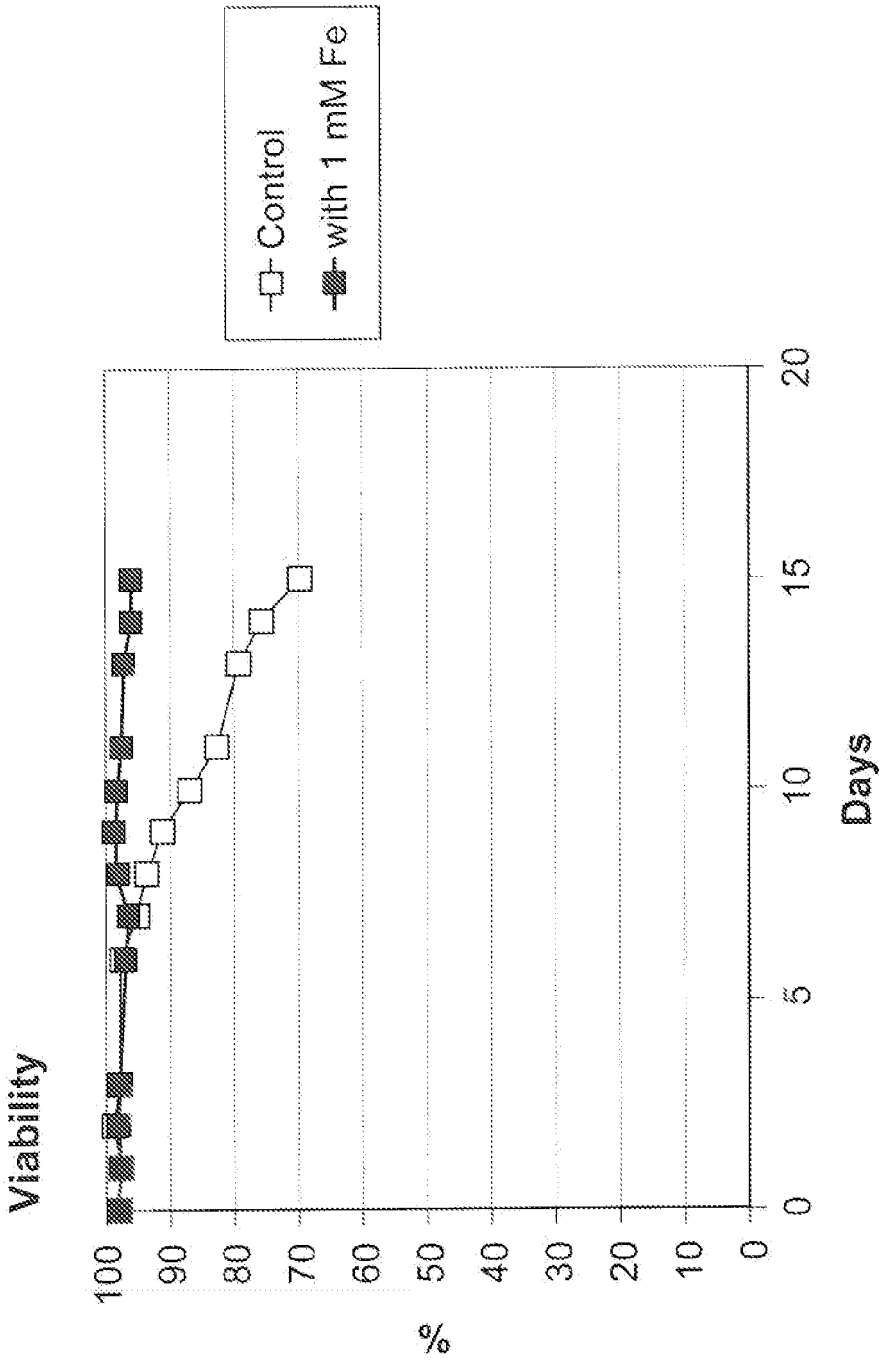

Control
with 1 mM Fe
Viability
%
Days
100
90
80
70
60
50
40
30
20
10
0
0
5
10
15
20

FIG. 8

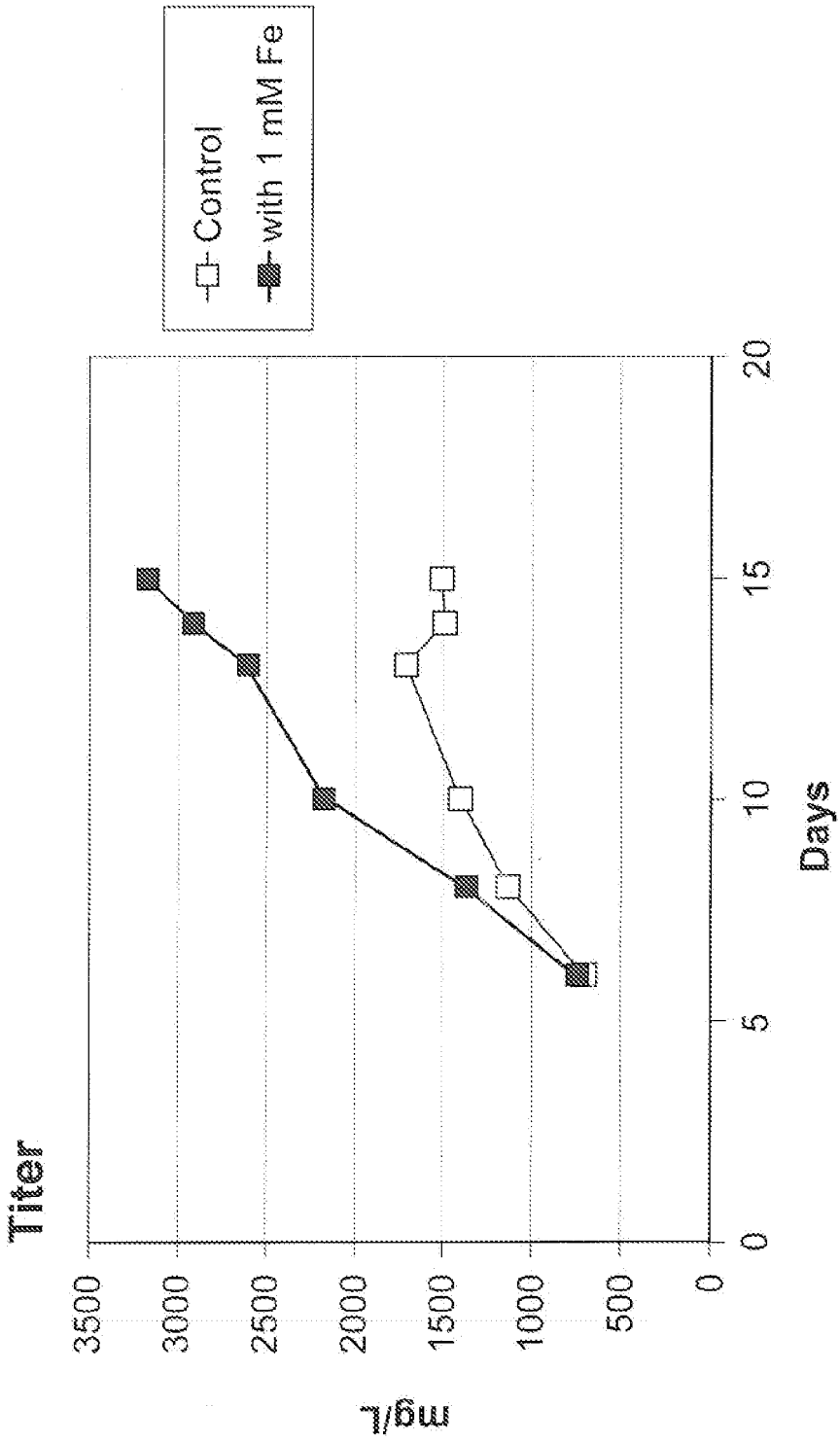

Titer
mg/L
3500
3000
2500
2000
1500
1000
500
0
0
5
10
15
20
Days
Control
with 1 mM Fe

FIG. 9

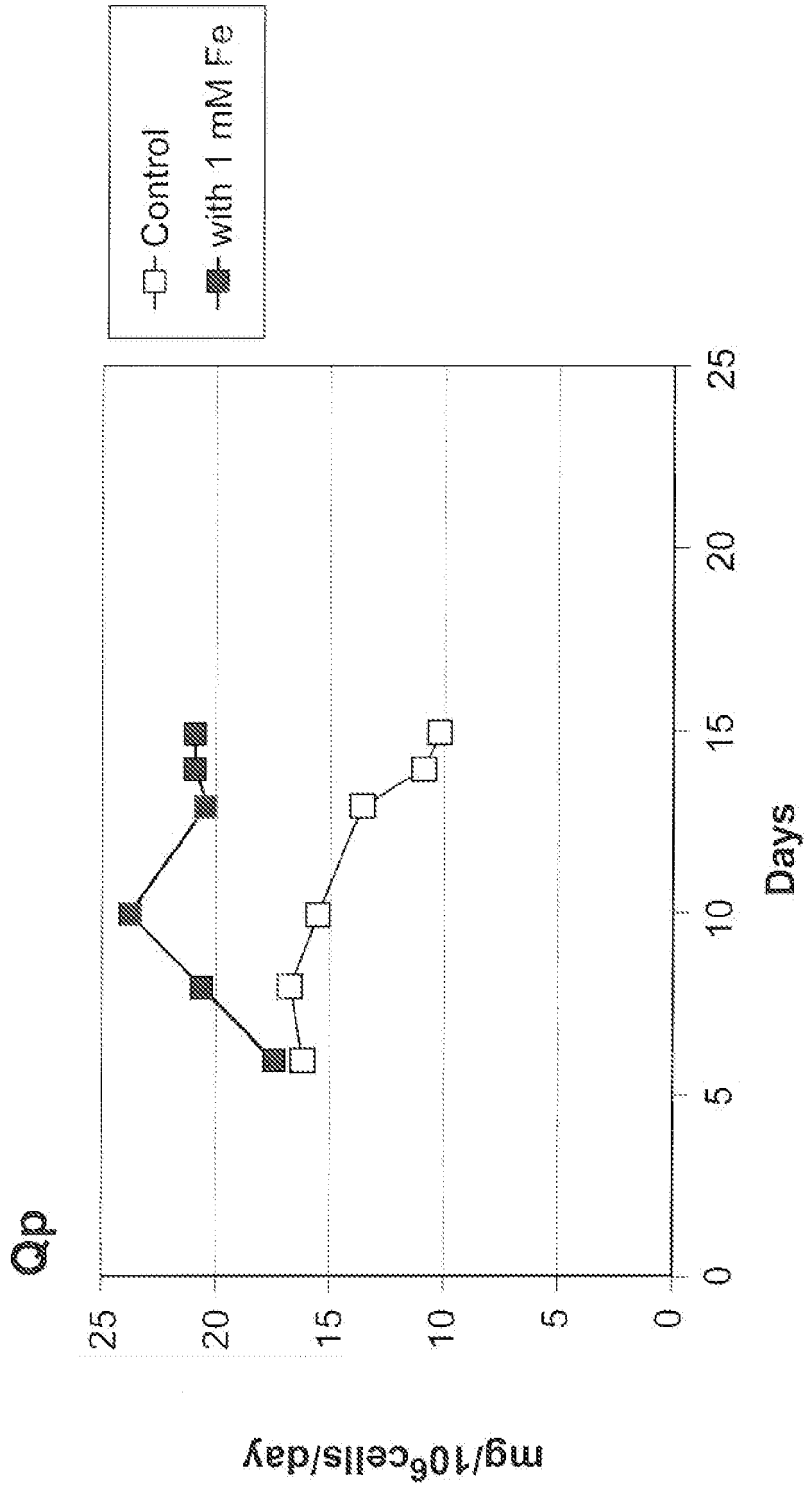


FIG. 10

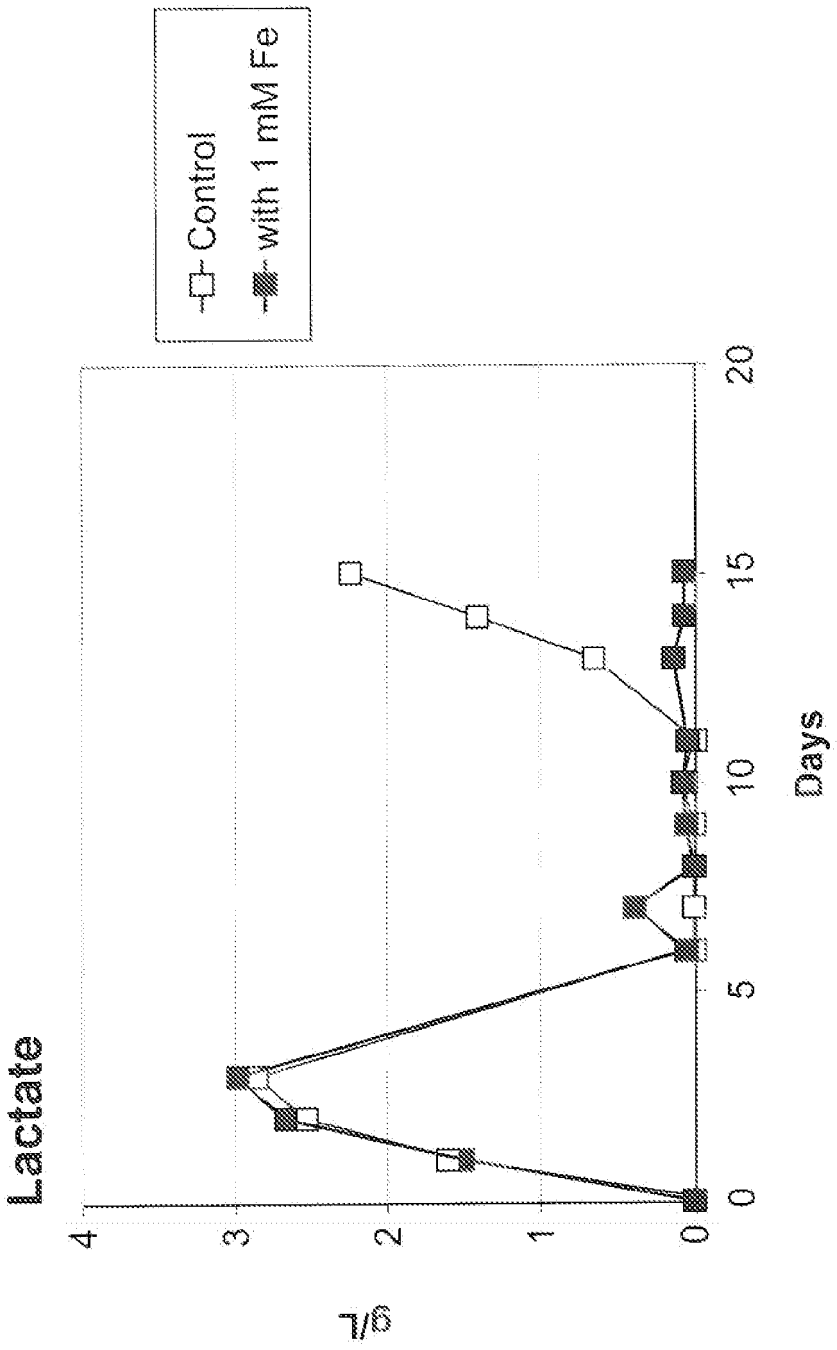


FIG. 11

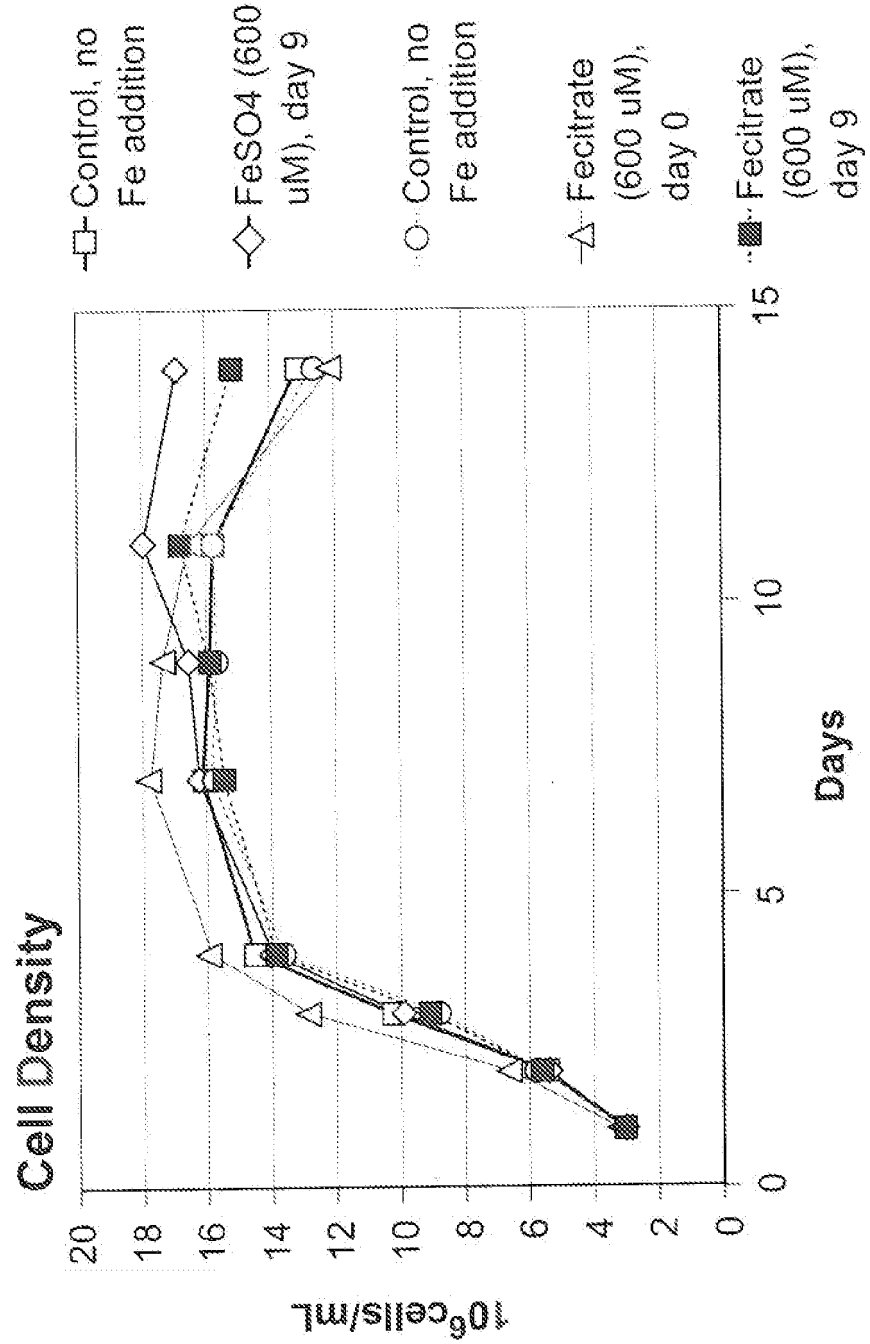

Cell Density
10^6cells/mL
Days
0
2
4
6
8
10
12
14
16
18
20
0
5
10
15
Control, no Fe addition
FeSO4 (600 uM), day 9
Control, no Fe addition
Fecitrate (600 uM), day 0
Fecitrate (600 uM), day 9

FIG. 12

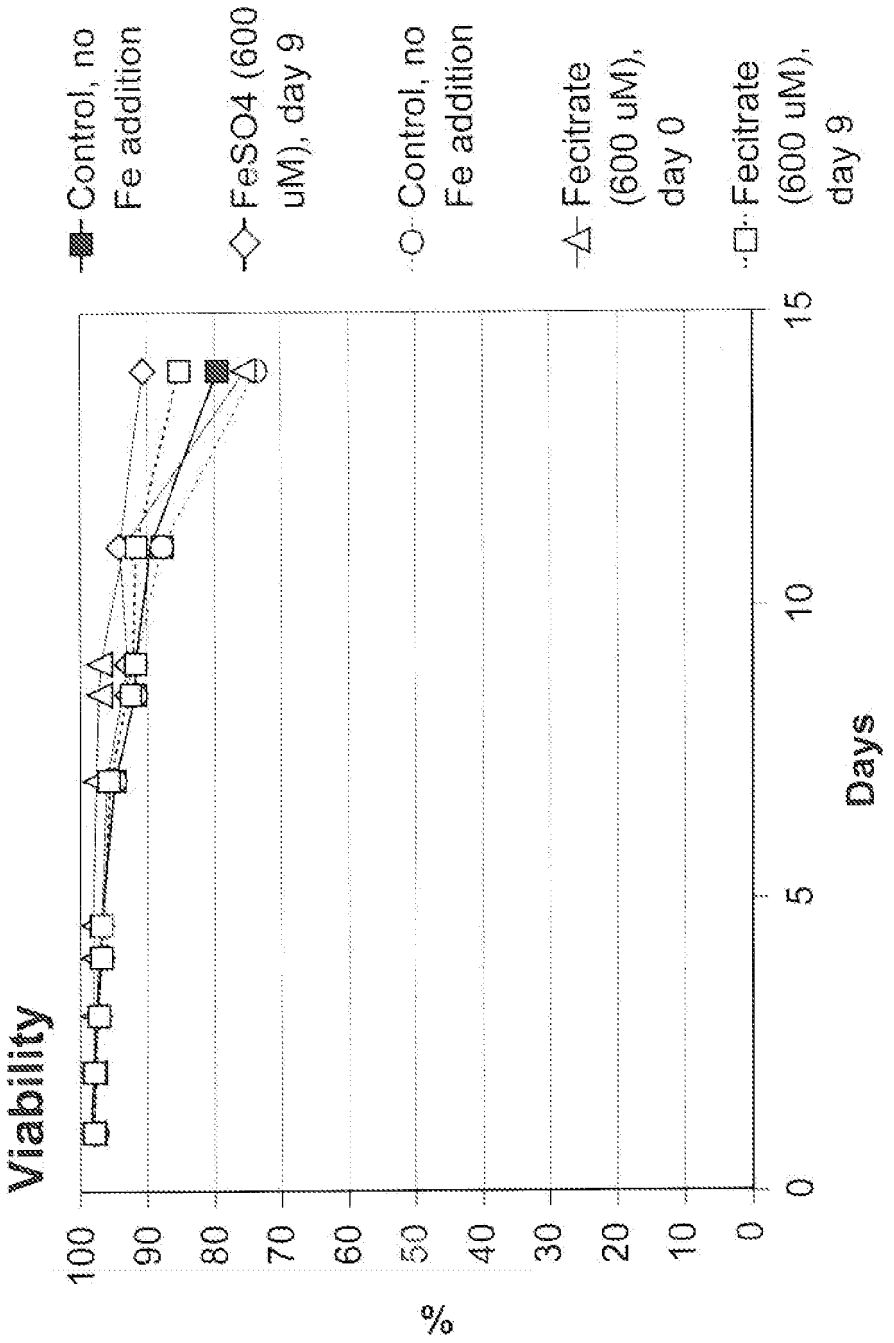

Viability
%
100
90
80
70
60
50
40
30
20
10
0
0
5
10
15
Days
Control, no Fe addition
FeSO4 (600 uM), day 9
Control, no Fe addition
Fecitrate (600 uM), day 0
Fecitrate (600 uM), day 9

FIG. 13

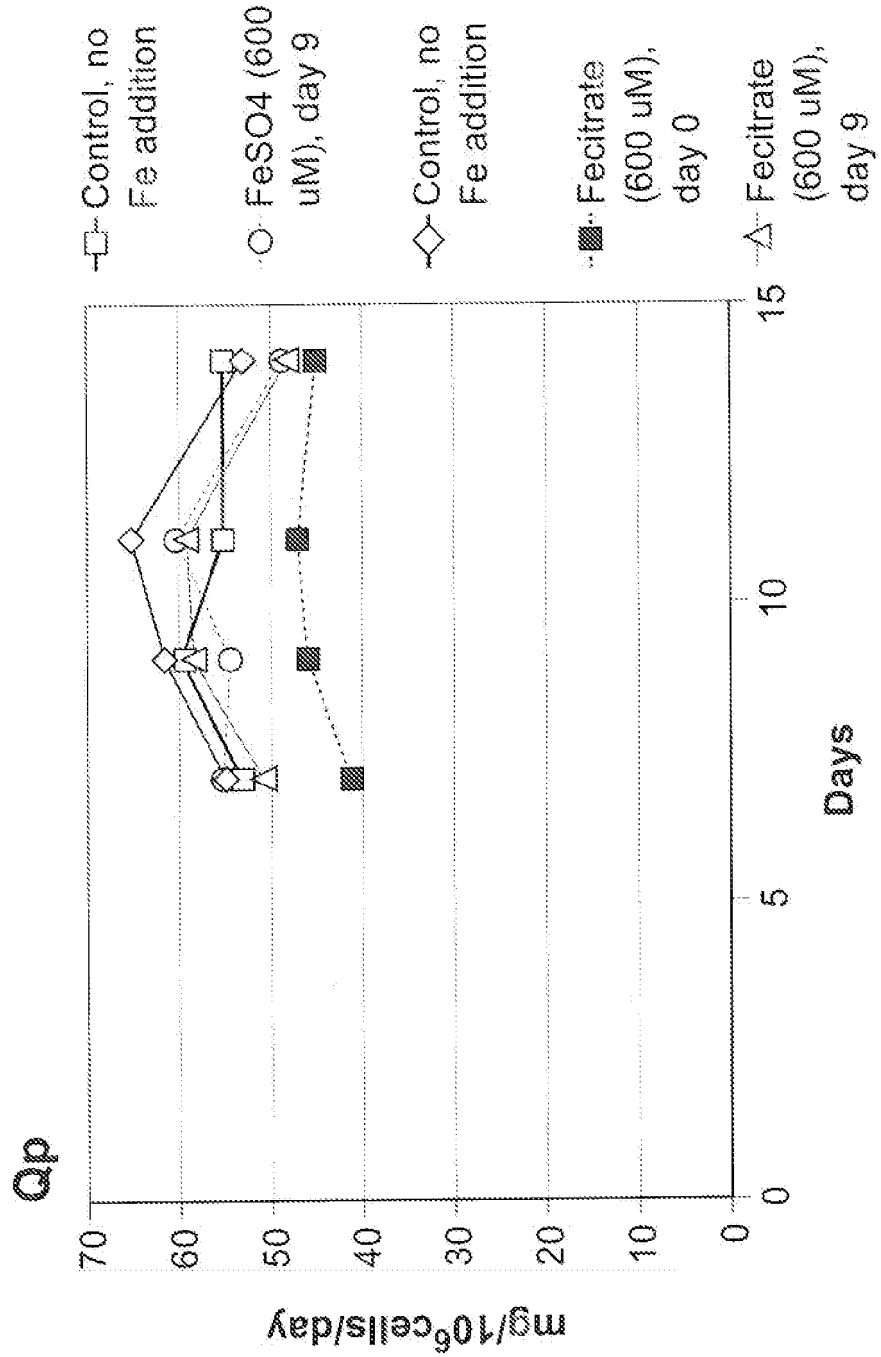

Qp
mg/10^6cells/day
70
60
50
40
30
20
10
0
0
5
10
15
Days
Control, no Fe addition
FeSO4 (600 uM), day 9
Control, no Fe addition
Fecitrate (600 uM), day 0
Fecitrate (600 uM), day 9

FIG. 14

