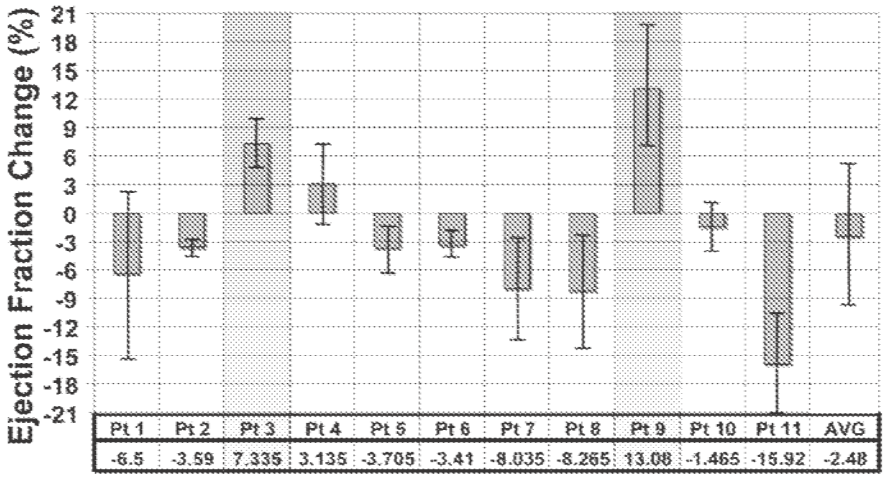

Ejection Fraction Change (%)
21
18
15
12
9
6
3
0
-3
-6
-9
-12
-15
-18
-21
Pt 1 Pt 2 Pt 3 Pt 4 Pt 5 Pt 6 Pt 7 Pt 8 Pt 9 Pt 10 Pt 11 AVG
-6.5 -3.59 7.335 3.135 -3.705 -3.41 -8.035 -8.265 13.08 -1.465 -15.92 -2.48

Fig. 1

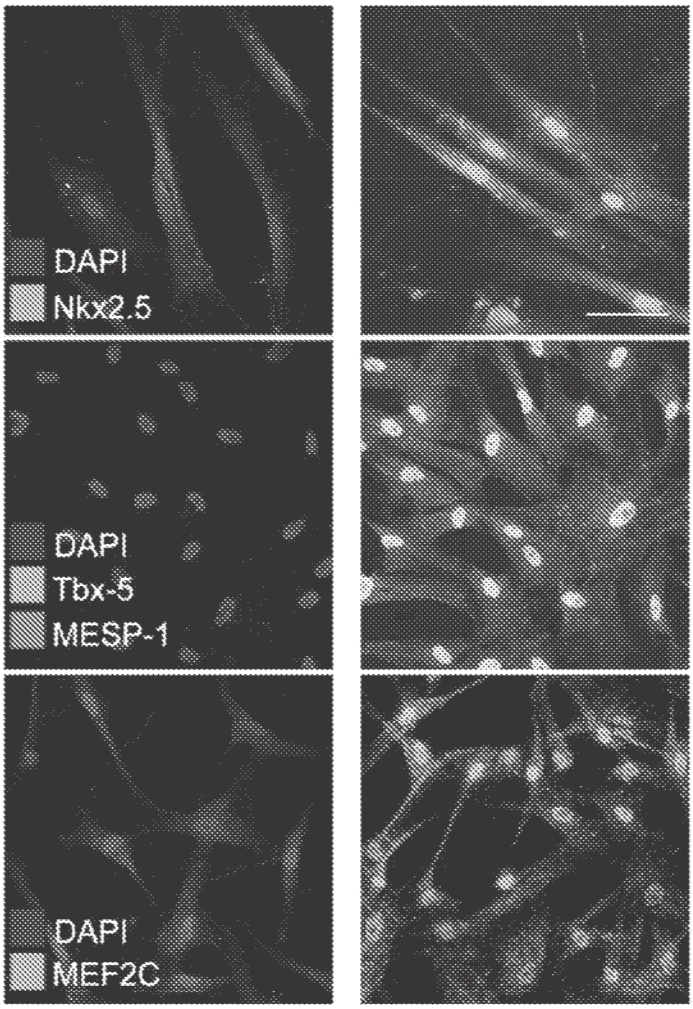

DAPI
Nkx2.5
DAPI
Tbx-5
MESP-1
DAPI
MEF2C

Fig. 2

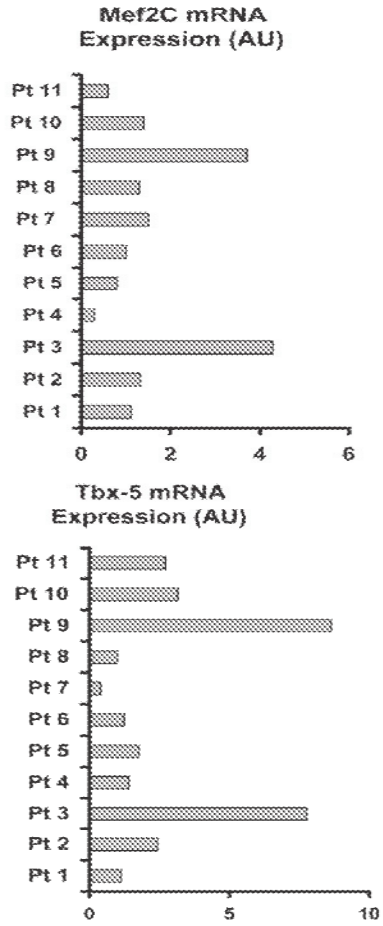

Mef2C mRNA
Expression (AU)
Pt 11
Pt 10
Pt 9
Pt 8
Pt 7
Pt 6
Pt 5
Pt 4
Pt 3
Pt 2
Pt 1
0
2
4
6
Tbx-5 mRNA
Expression (AU)
Pt 11
Pt 10
Pt 9
Pt 8
Pt 7
Pt 6
Pt 5
Pt 4
Pt 3
Pt 2
Pt 1
0
5
10

Fig.3

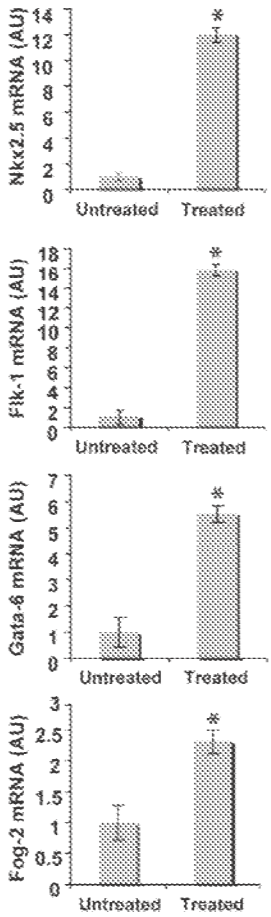

Nkx2.5 mRNA (AU)
14
12
10
8
6
4
2
0
Untreated
Treated
*
Flk-1 mRNA (AU)
18
16
14
12
10
8
6
4
2
0
Untreated
Treated
*
Gata-6 mRNA (AU)
7
6
5
4
3
2
1
0
Untreated
Treated
*
Fog-2 mRNA (AU)
3
2.5
2
1.5
1
0.5
0
Untreated
Treated
*

Fig. 4

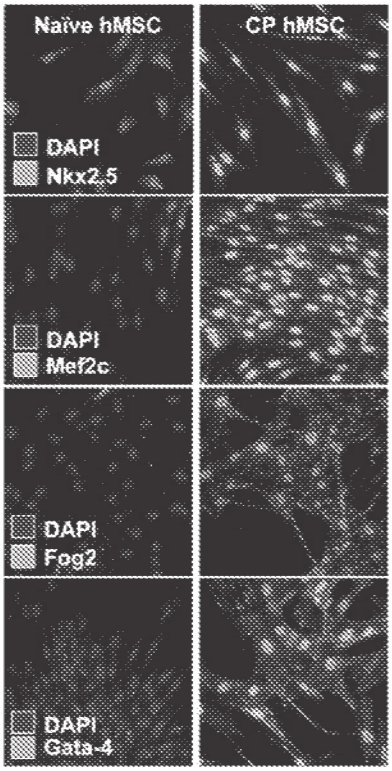

Naïve hMSC
CP hMSC
DAPI
Nkx2.5
DAPI
Mef2c
DAPI
Fog2
DAPI
Gata-4

Fig.5

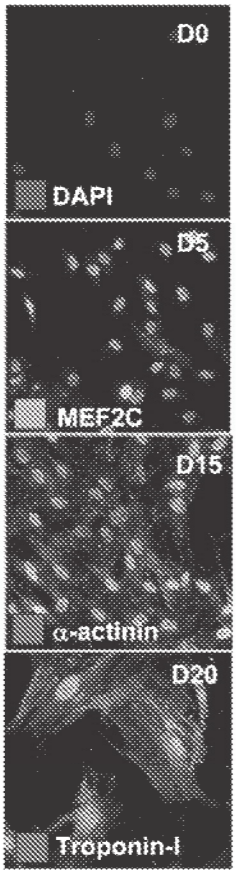
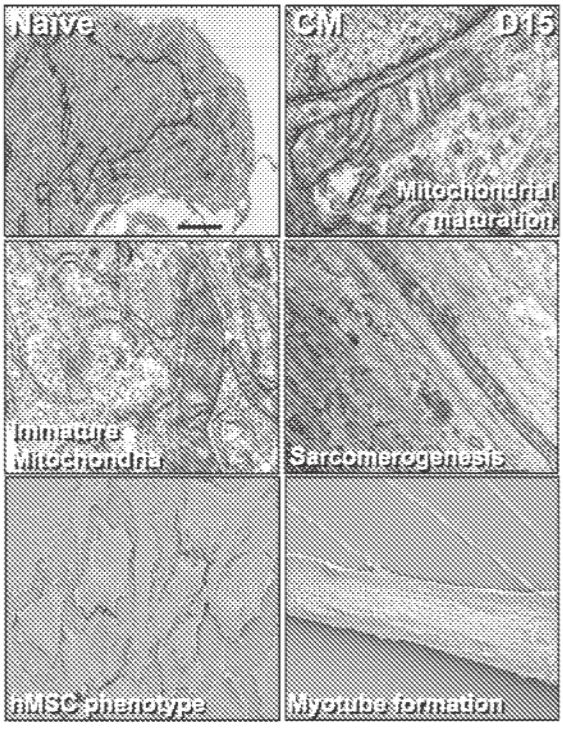


Fig.6



Figure

Fig. 7

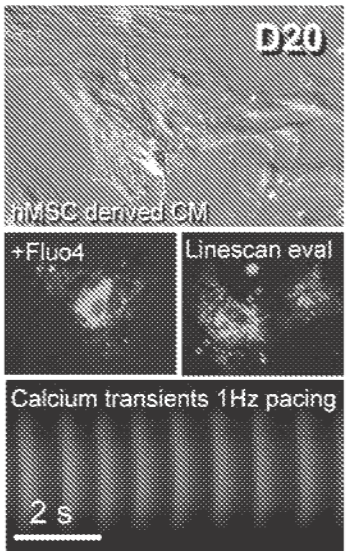

D20
hMSC derived CM
+Fluo4
Linescan eval
Calcium transients 1Hz pacing
2 s

Fig. 8

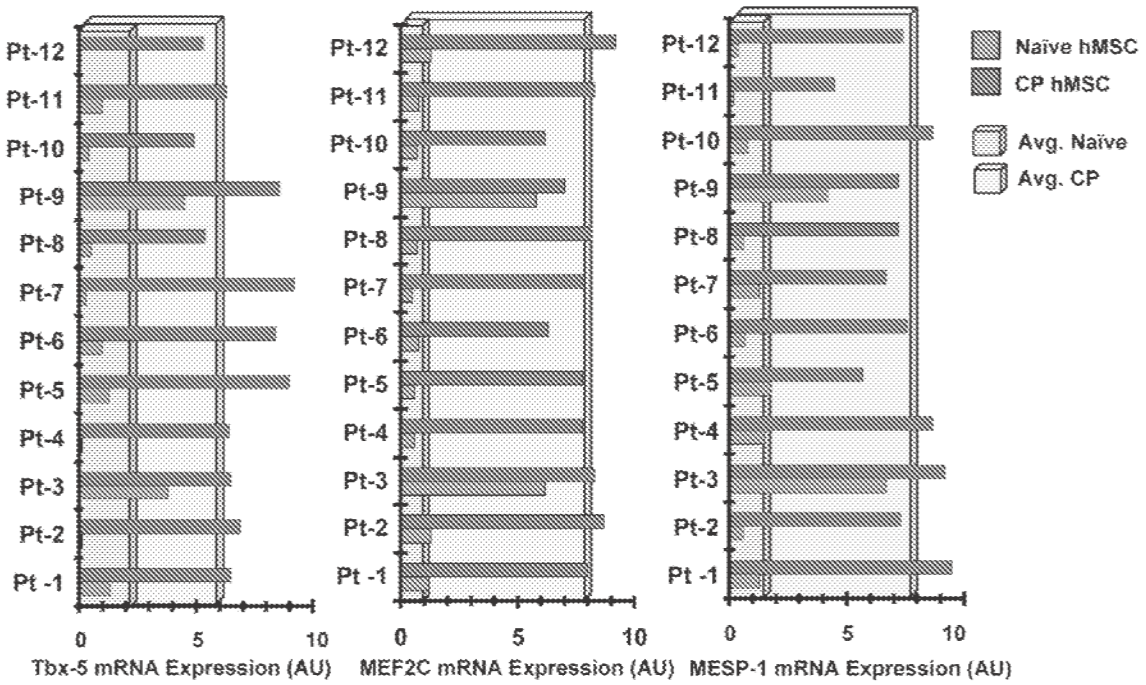

Pt-12
Pt-11
Pt-10
Pt-9
Pt-8
Pt-7
Pt-6
Pt-5
Pt-4
Pt-3
Pt-2
Pt -1
0
5
10
Tbx-5 mRNA Expression (AU)
MEF2C mRNA Expression (AU)
MESP-1 mRNA Expression (AU)
Naïve hMSC
CP hMSC
Avg. Naïve
Avg. CP

Fig. 9

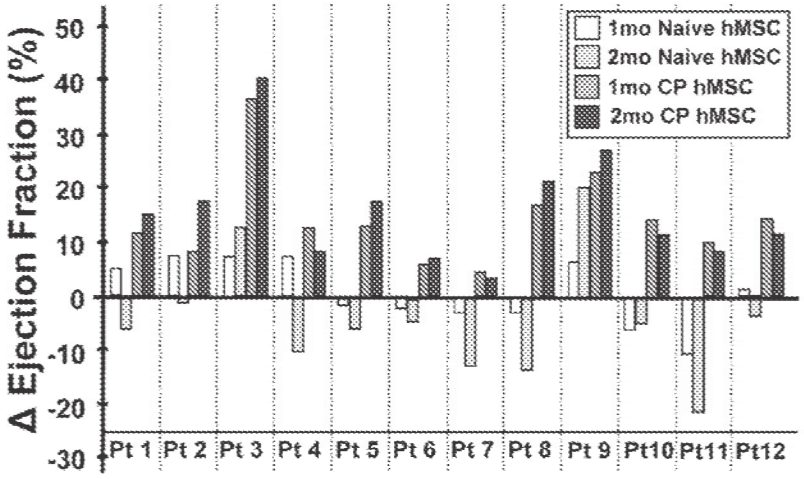

Δ Ejection Fraction (%)
50
40
30
20
10
0
-10
-20
-30
Pt 1
Pt 2
Pt 3
Pt 4
Pt 5
Pt 6
Pt 7
Pt 8
Pt 9
Pt10
Pt11
Pt12
1mo Naive hMSC
2mo Naive hMSC
1mo CP hMSC
2mo CP hMSC

Fig. 10

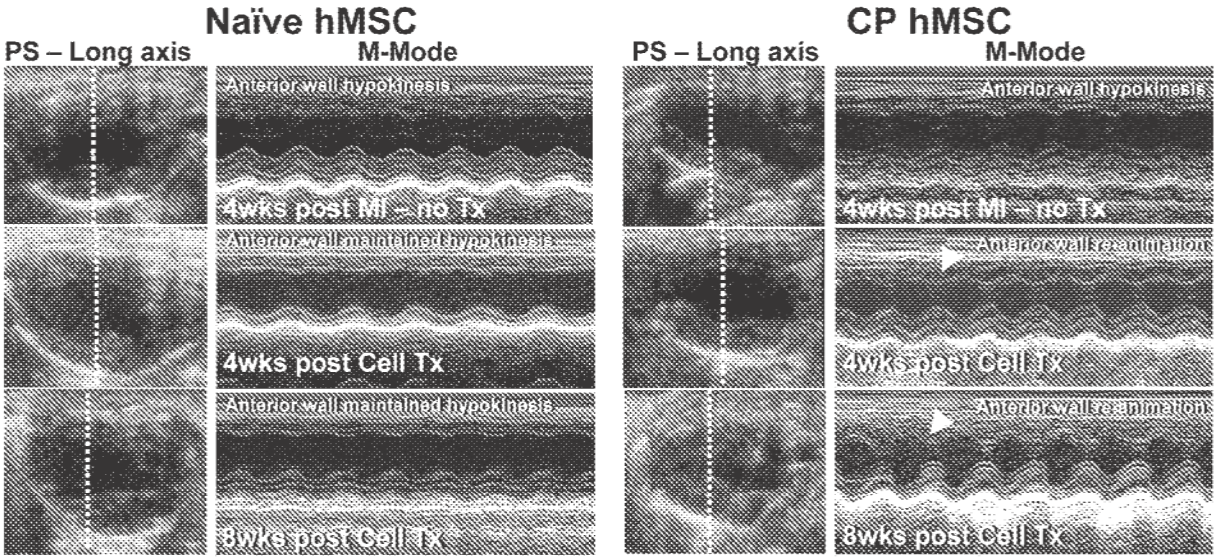

Naïve hMSC
CP hMSC
PS – Long axis
M-Mode
PS – Long axis
M-Mode
Anterior wall hypokinesis
4wks post MI – no Tx
Anterior wall maintained hypokinesis
4wks post Cell Tx
Anterior wall maintained hypokinesis
8wks post Cell Tx
Anterior wall hypokinesis
4wks post MI – no Tx
Anterior wall reanimation
4wks post Cell Tx
Anterior wall reanimation
8wks post Cell Tx

Fig. 11

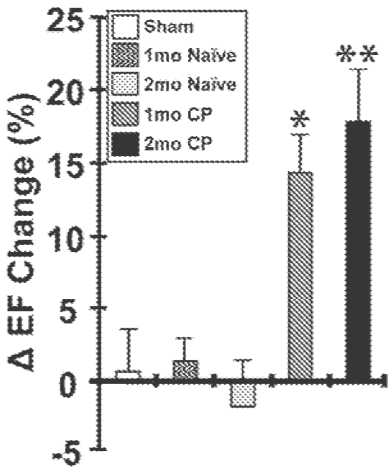

Sham
1mo Naïve
2mo Naïve
1mo CP
2mo CP
Δ EF Change (%)
25
20
15
10
5
0
-5
*
**

Fig.12

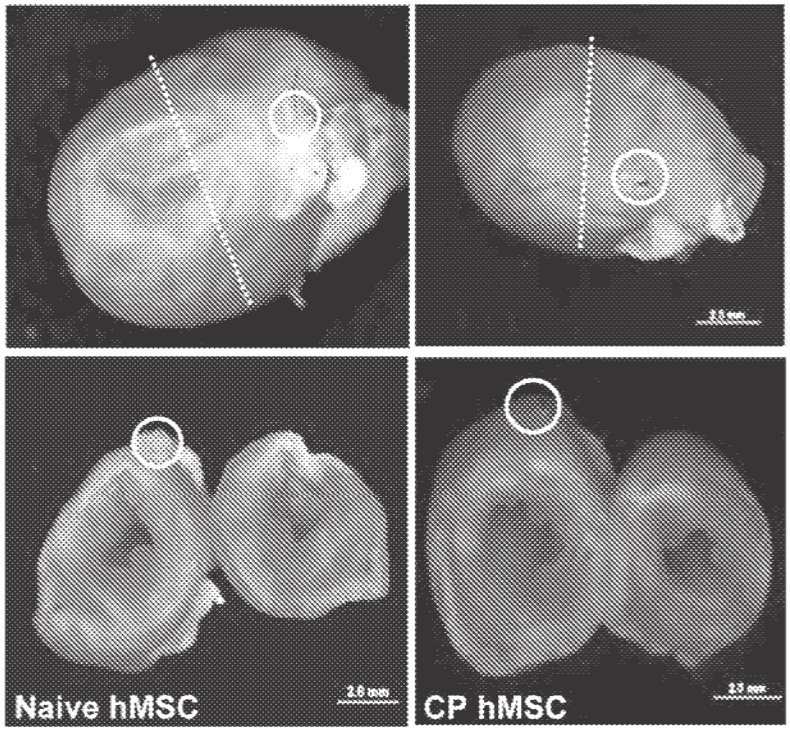


Fig. 13

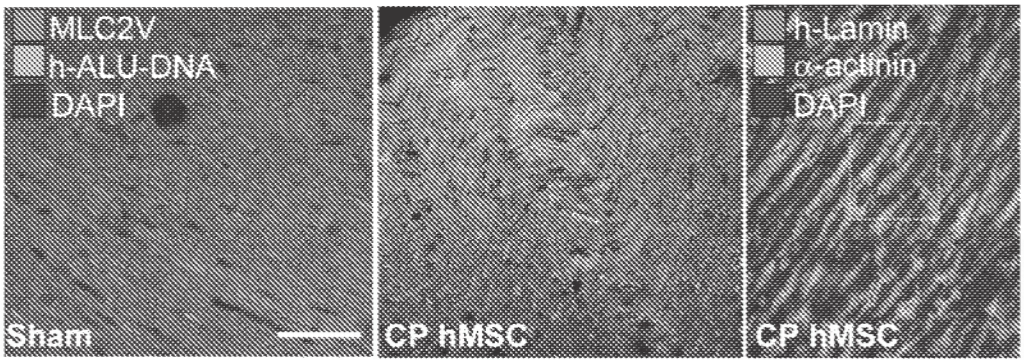


Fig. 14

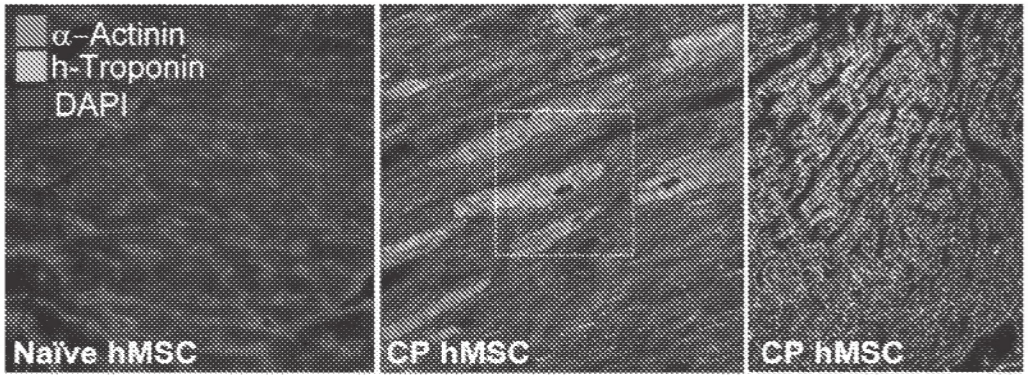


Fig. 15

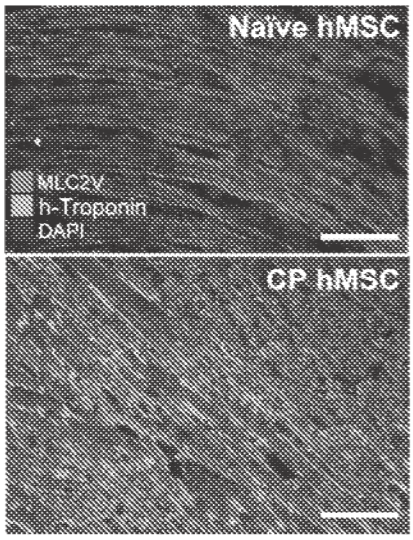


Fig. 16

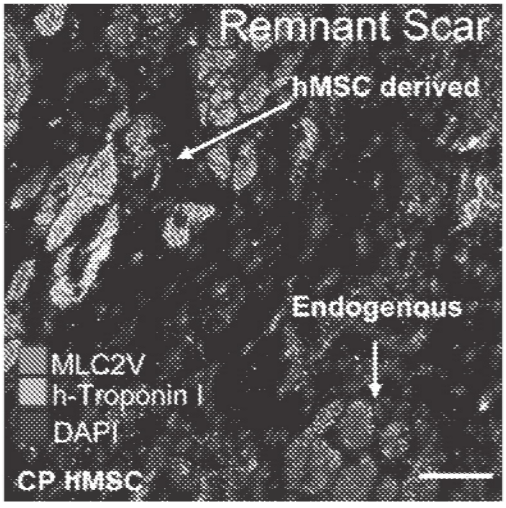


Fig. 17

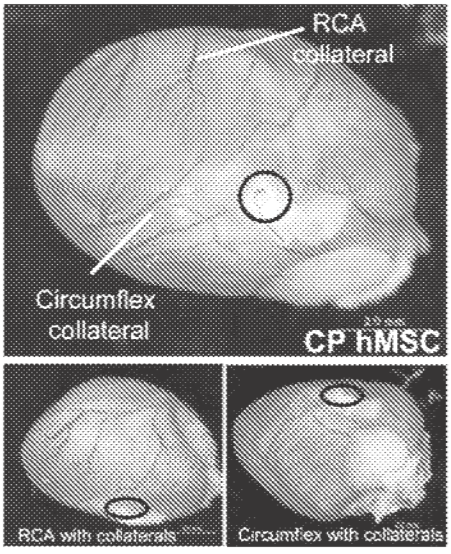


Fig. 18

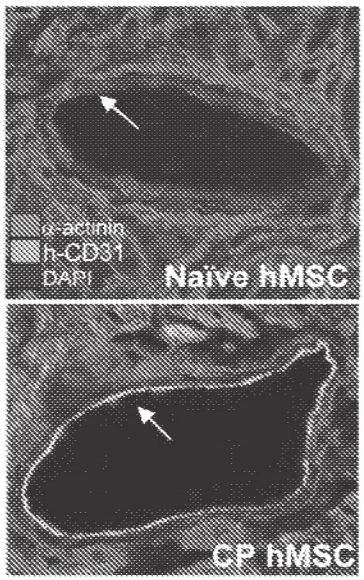

α-actinin
h-CD31
DAPI
Naïve hMSC
CP hMSC

Fig. 19

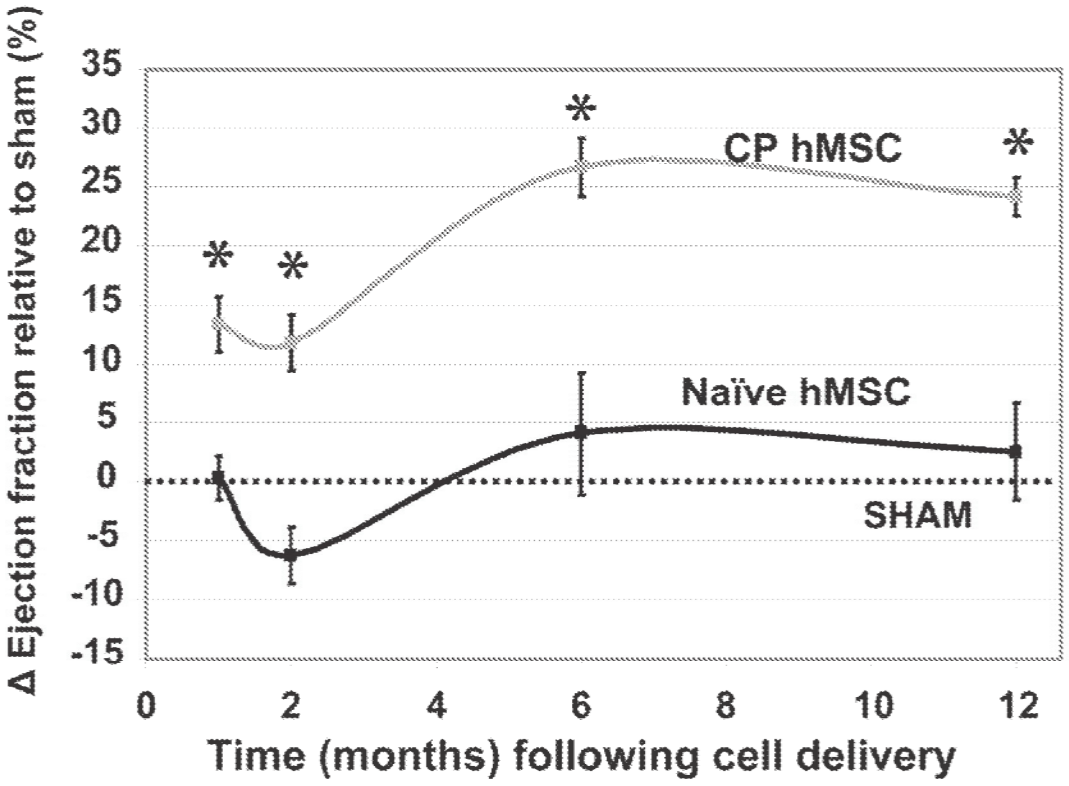

Δ Ejection fraction relative to sham (%)
35
30
25
20
15
10
5
0
-5
-10
-15
0
2
4
6
8
10
12
Time (months) following cell delivery
CP hMSC
Naïve hMSC
SHAM
*
*
*
*

Fig. 20

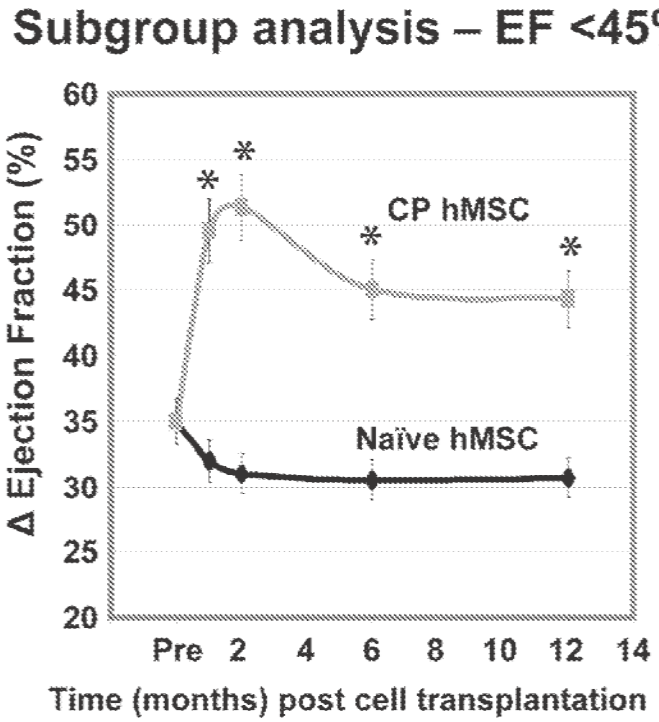

Subgroup analysis – EF <45%
Δ Ejection Fraction (%)
60
55
50
45
40
35
30
25
20
CP hMSC
Naïve hMSC
Pre 2 4 6 8 10 12 14
Time (months) post cell transplantation

Fig. 21

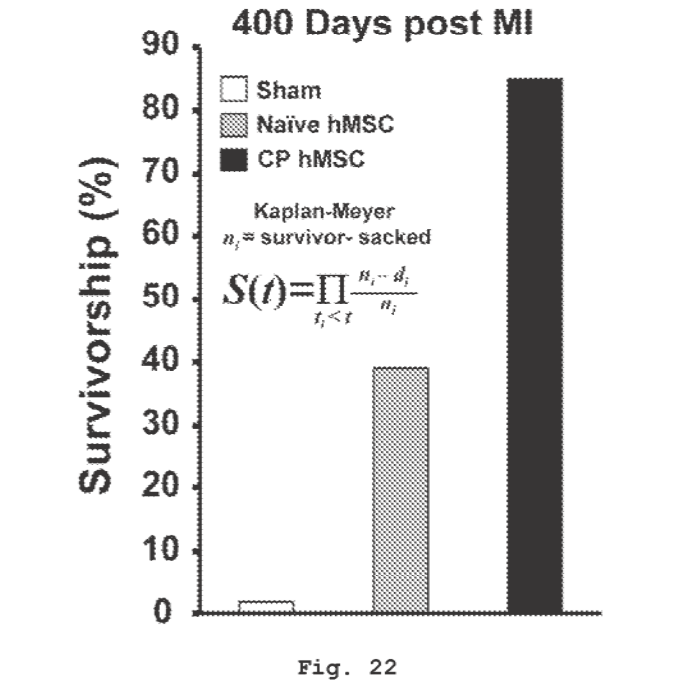

Subgroup analysis – EF <45%
400 Days post MI
Survivorship (%)
90
80
70
60
50
40
30
20
10
0
Sham
Naïve hMSC
CP hMSC
Kaplan-Meyer
n_i= survivor- sacked
$S(t)=\prod_{t_i<t}\frac{n_i-d_i}{n_i}$

Fig. 22

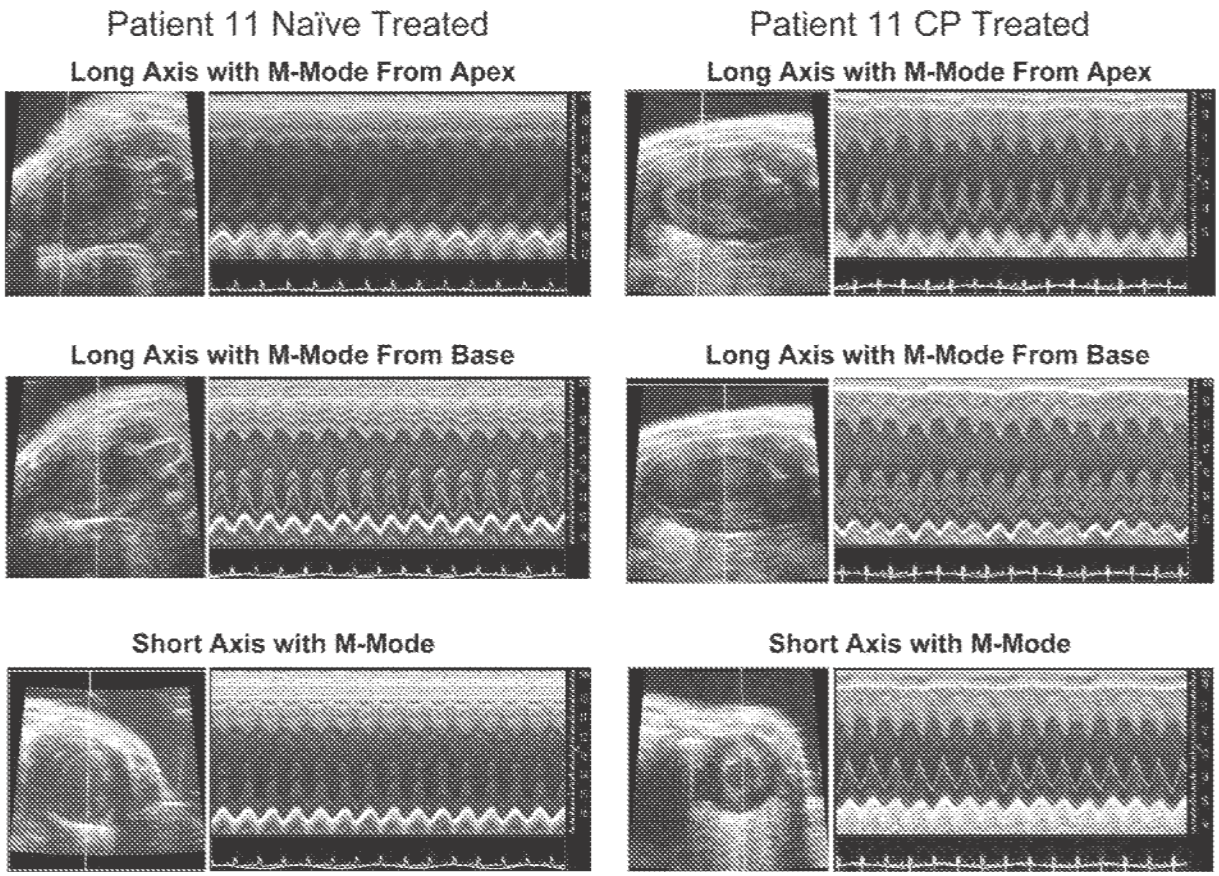

Patient 11 Naïve Treated
Long Axis with M-Mode From Apex
Patient 11 CP Treated
Long Axis with M-Mode From Apex
Long Axis with M-Mode From Base
Long Axis with M-Mode From Base
Short Axis with M-Mode
Short Axis with M-Mode

Fig. 23