Figure 1A

Figure 1B

hES cells differentiate in co-culture with END-2 cells

Bm shows an area of beating muscle; cy shows one on many cystic embryonic endoderm structures

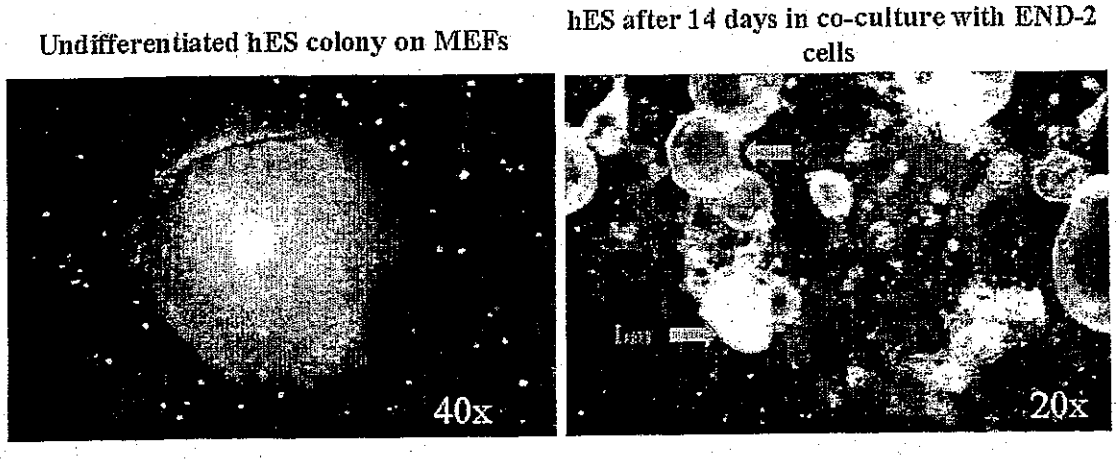


Figure 2

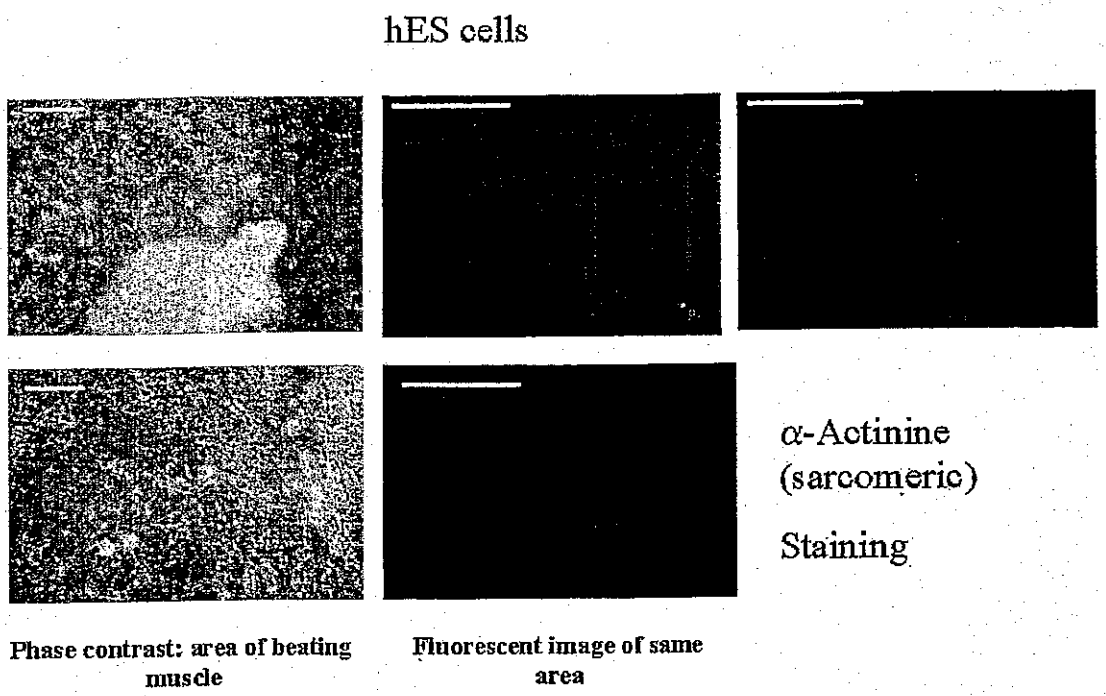

hES cells
α-Actinine
(sarcomeric)
Staining
Phase contrast: area of beating muscle
Fluorescent image of same area

Fig.3.

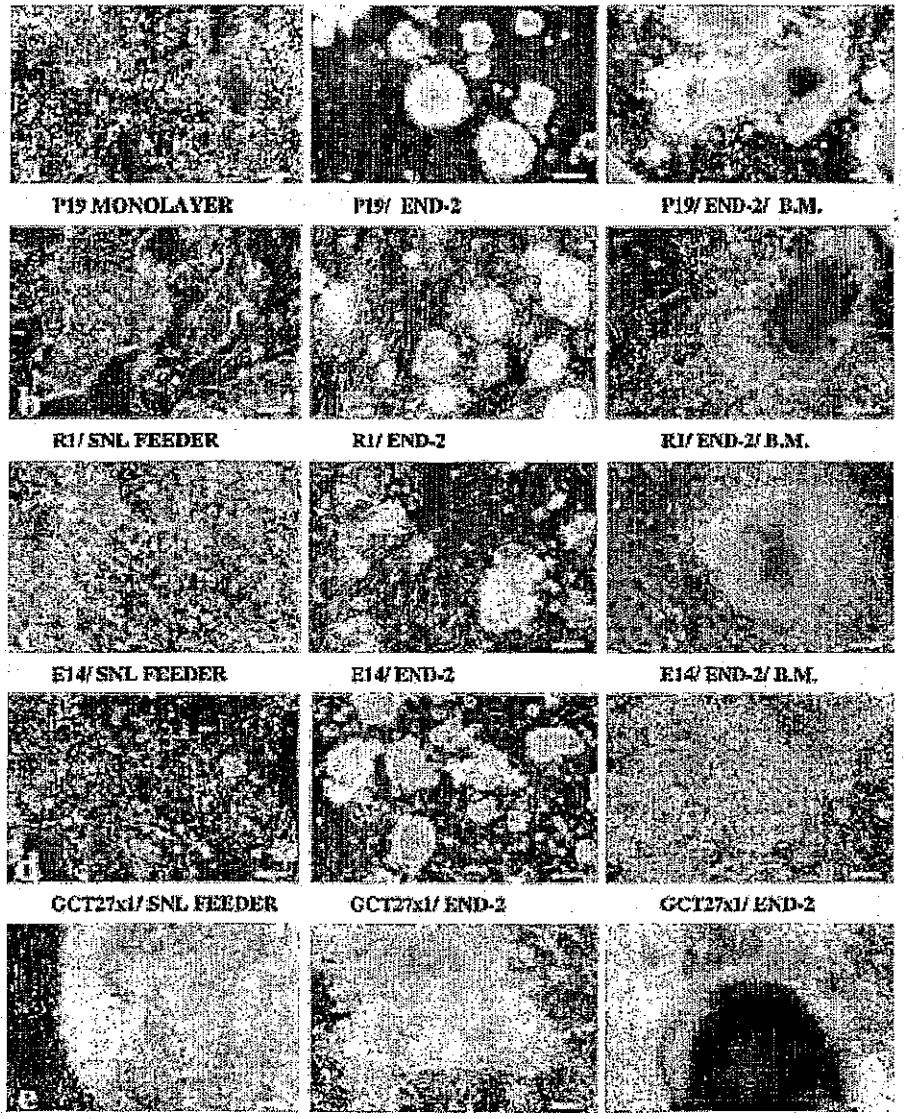

P19 MONOLAYER
P19/ END-2
P19/ END-2/ B.M.
R1/ SNL FEEDER
R1/ END-2
R1/ END-2/ B.M.
E14/ SNL FEEDER
E14/ END-2
E14/ END-2/ B.M.
GCT27x1/ SNL FEEDER
GCT27x1/ END-2
GCT27x1/ END-2
hES /MEF feeder
hES/END2
hES/END2/B.M.

Fig. 4 Action potentials from non-dissociated hES cardiomyocytes

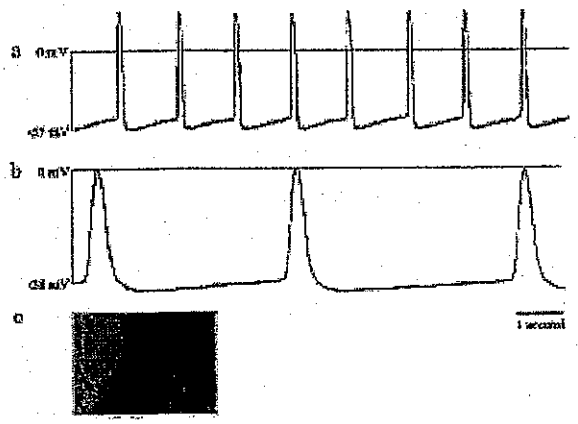


Fig. 5. Adult human cardiomyocytes

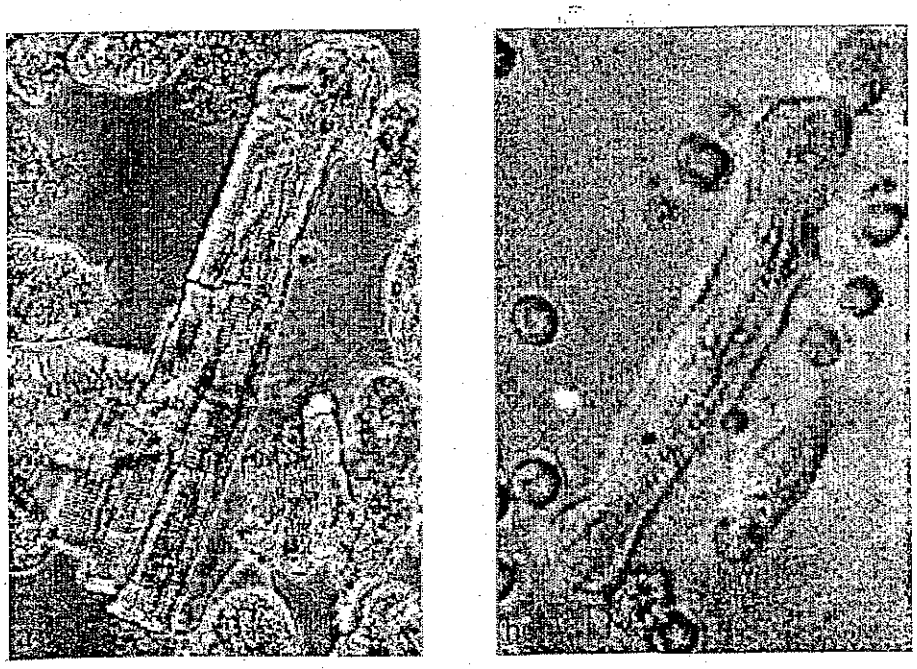


Fig 6.

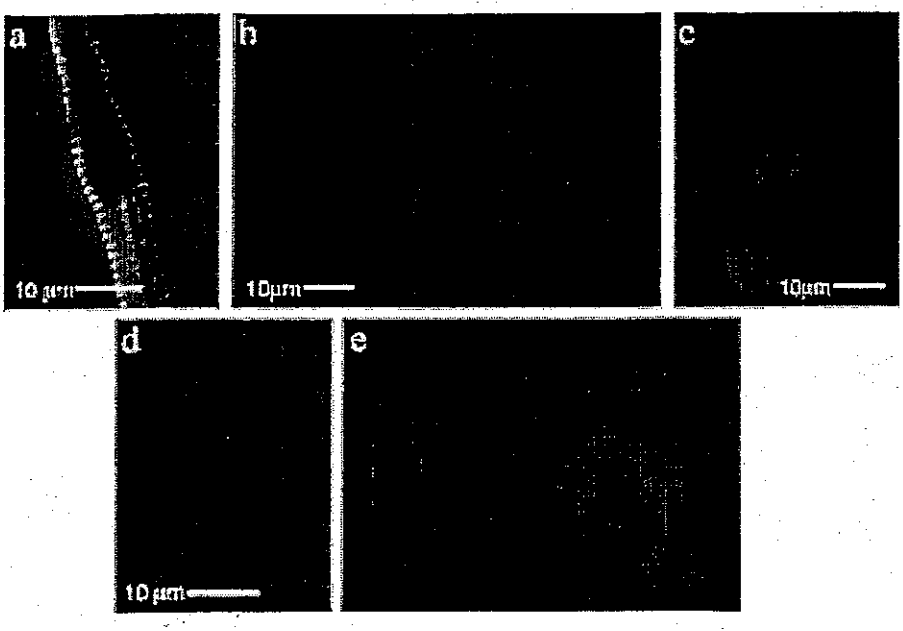
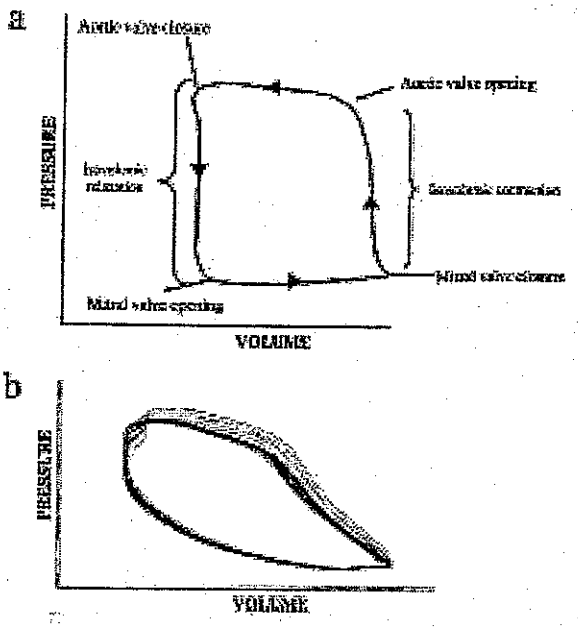


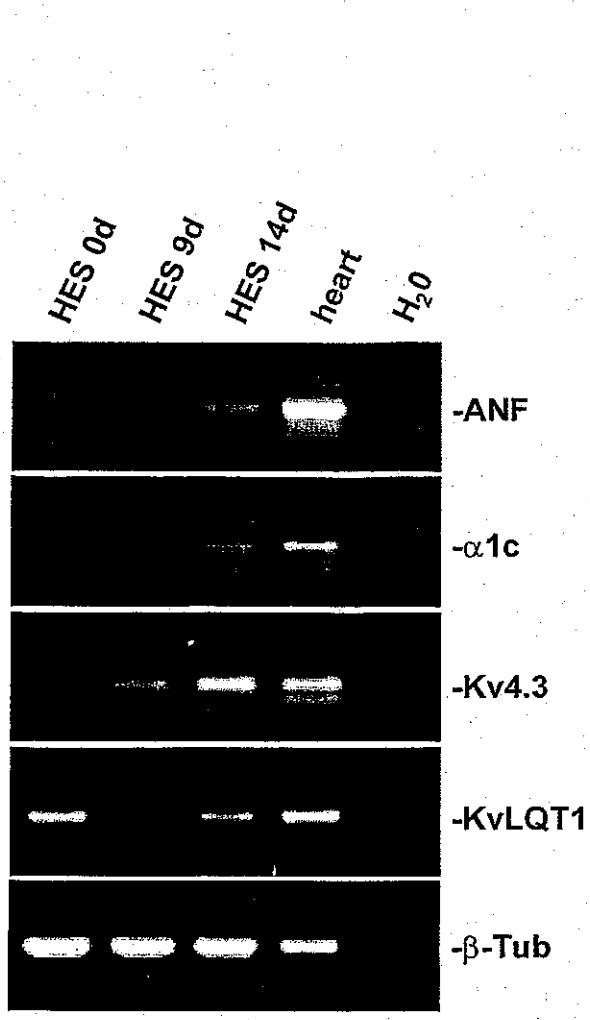
Fig. 7

control



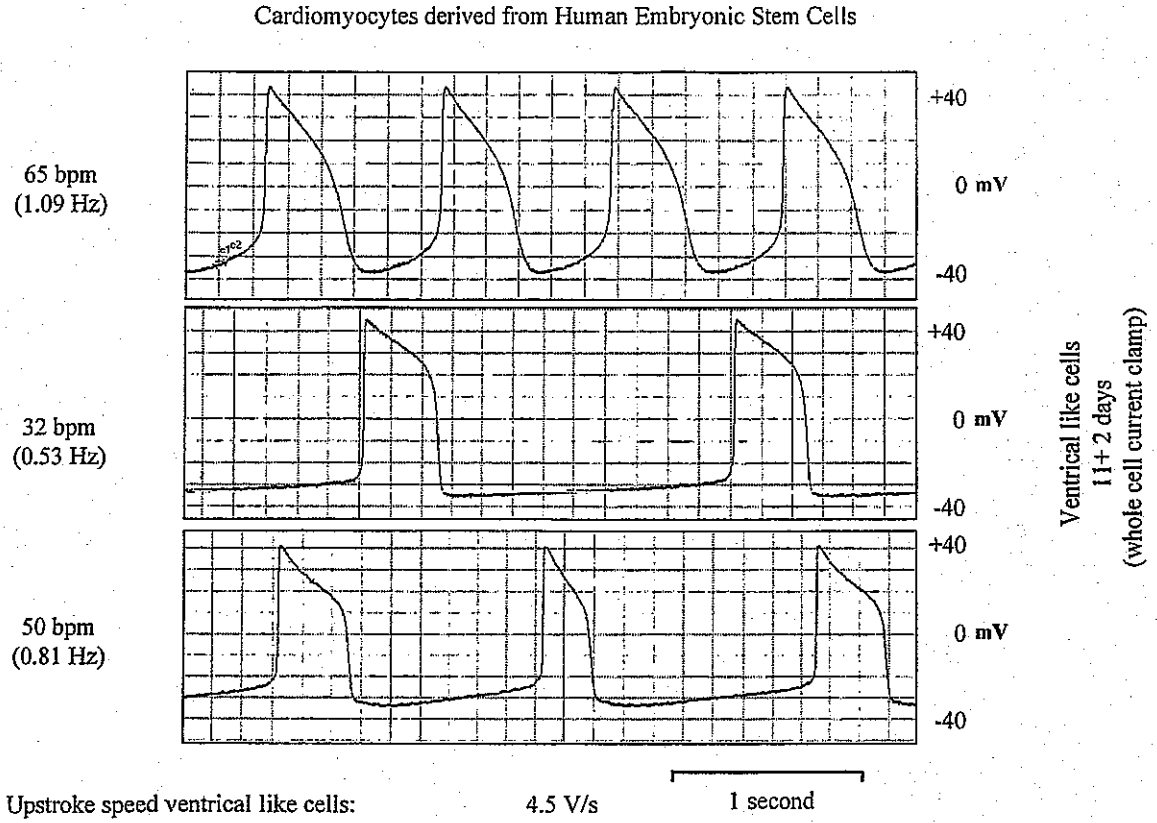
Post-infarct

Figure 8



5

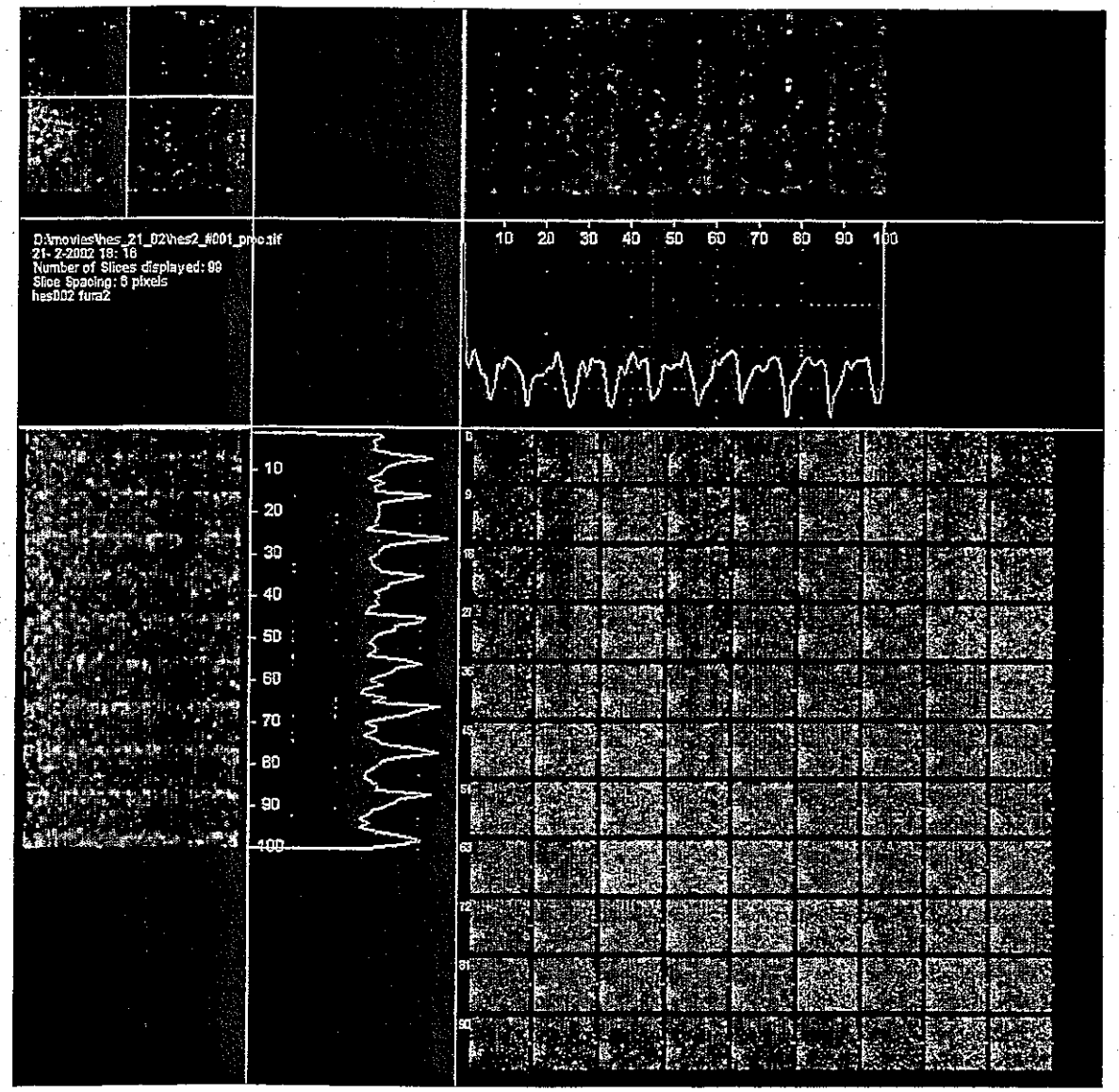
Figure 9A



Upstroke speed ventrical like cells: 4.5 V/s
Upstroke speed 12-14 weeks foetal myocardium: 42.2 V/s

5

Figure 9B

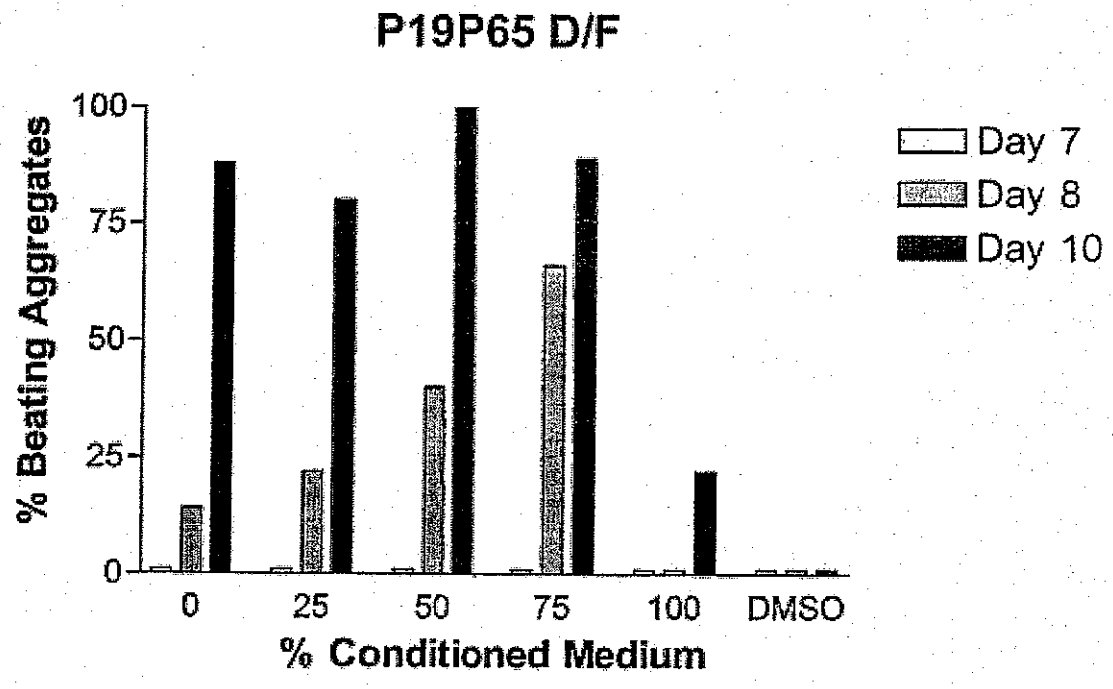

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21- 2-2002 18: 16
Number of Slices displayed: 99
Slice Spacing: 5 pixels
hes002 fura2
10 20 30 40 50 60 70 80 90 100
10
20
30
40
50
60
70
80
90
100

5

Figure 10A

Bioassay : non-feeder dependent embryonal carcinoma cells P19

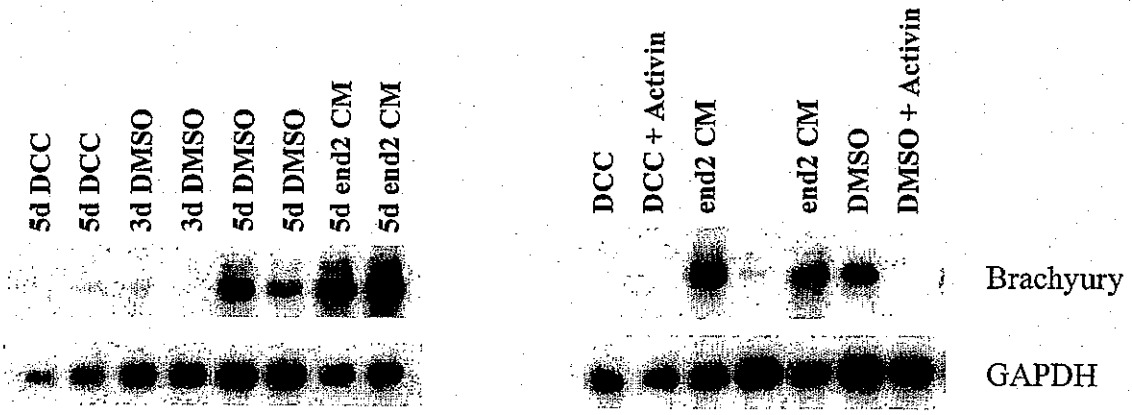
Endoderm (END2)-conditioned medium induces beating cardiomyocytes in monolayer cultures of P19 EC cells in a dose-dependent manner.



N.b. Background 0-5% in non-conditioned medium with DCC-FCS

2 of 5 P19 clones here respond to END2-CM; feeder dependent hES and mES do not.

Figure 10B



P19 aggregates

P19 aggregates,
4 days after plating

5