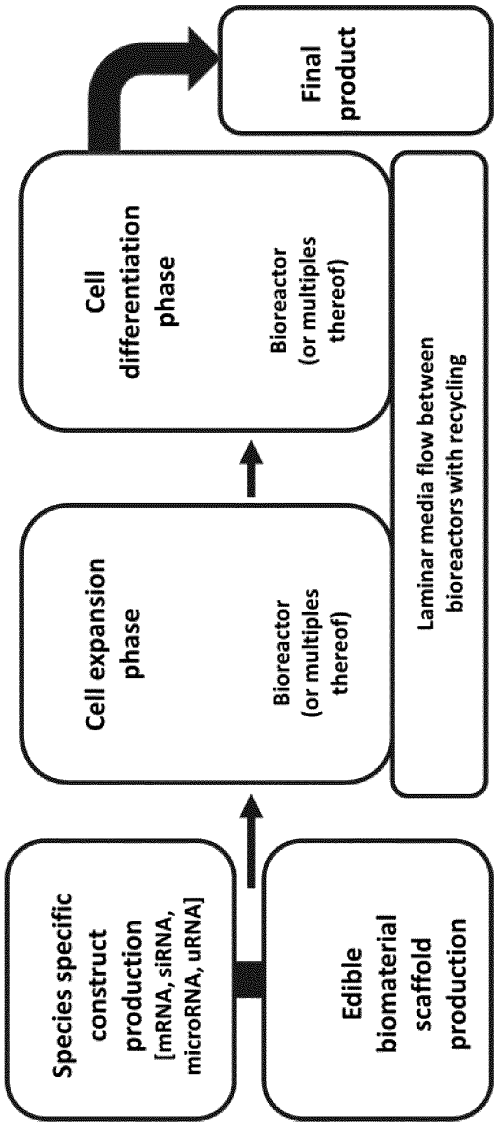

Species specific construct production [mRNA, siRNA, microRNA, uRNA]
Edible biomaterial scaffold production
Cell expansion phase
Bioreactor (or multiples thereof)
Cell differentiation phase
Bioreactor (or multiples thereof)
Laminar media flow between bioreactors with recycling
Final product

FIG. 1

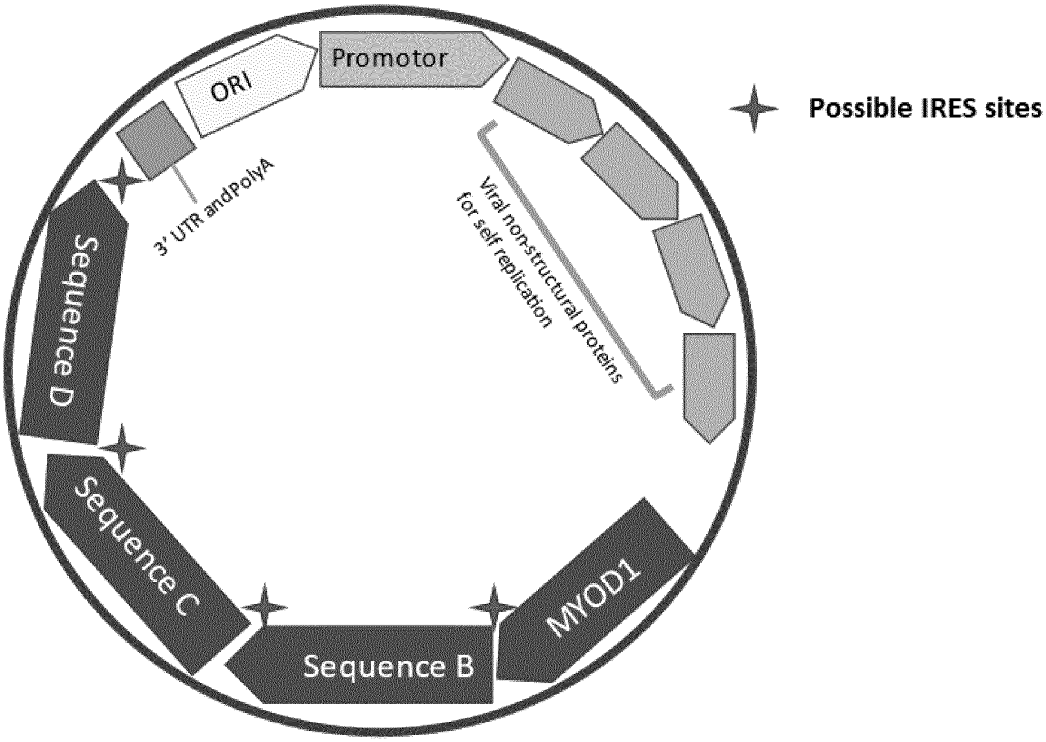

ORI
Promotor
Possible IRES sites
3' UTR andPolyA
Viral non-structural proteins for self replication
Sequence D
Sequence C
Sequence B
MYOD1

FIG. 2A

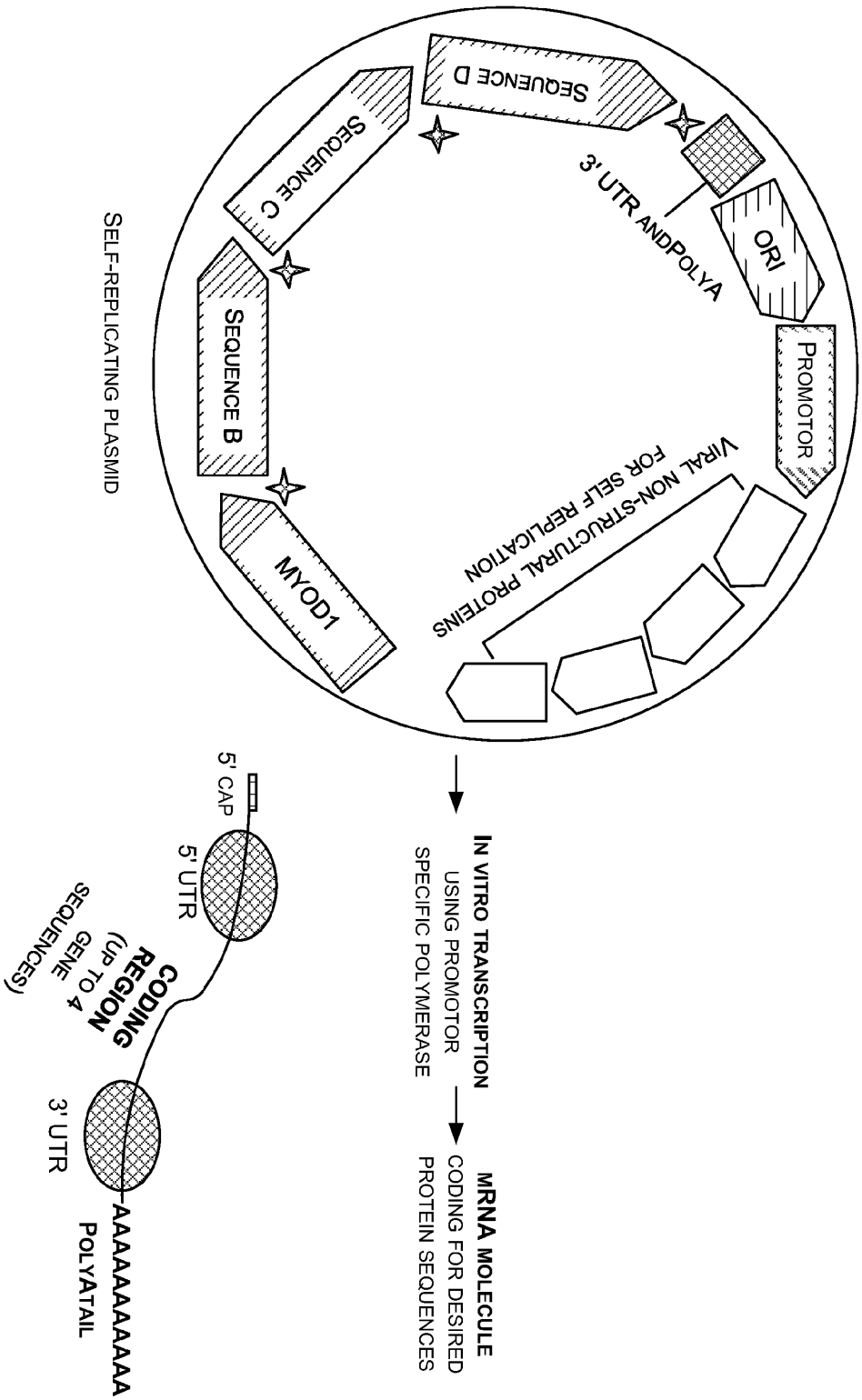

SELF-REPLICATING PLASMID
SEQUENCE D
SEQUENCE C
SEQUENCE B
MYOD1
3' UTR ANDPOLYA
ORI
PROMOTOR
VIRAL NON-STRUCTURAL PROTEINS FOR SELF REPLICATION
IN VITRO TRANSCRIPTION
USING PROMOTOR SPECIFIC POLYMERASE
MRNA MOLECULE
CODING FOR DESIRED PROTEIN SEQUENCES
5' CAP
5' UTR
CODING REGION (UP TO 4 GENE SEQUENCES)
3' UTR
AAAAAAAAAA
POLYATAIL

FIG. 2B

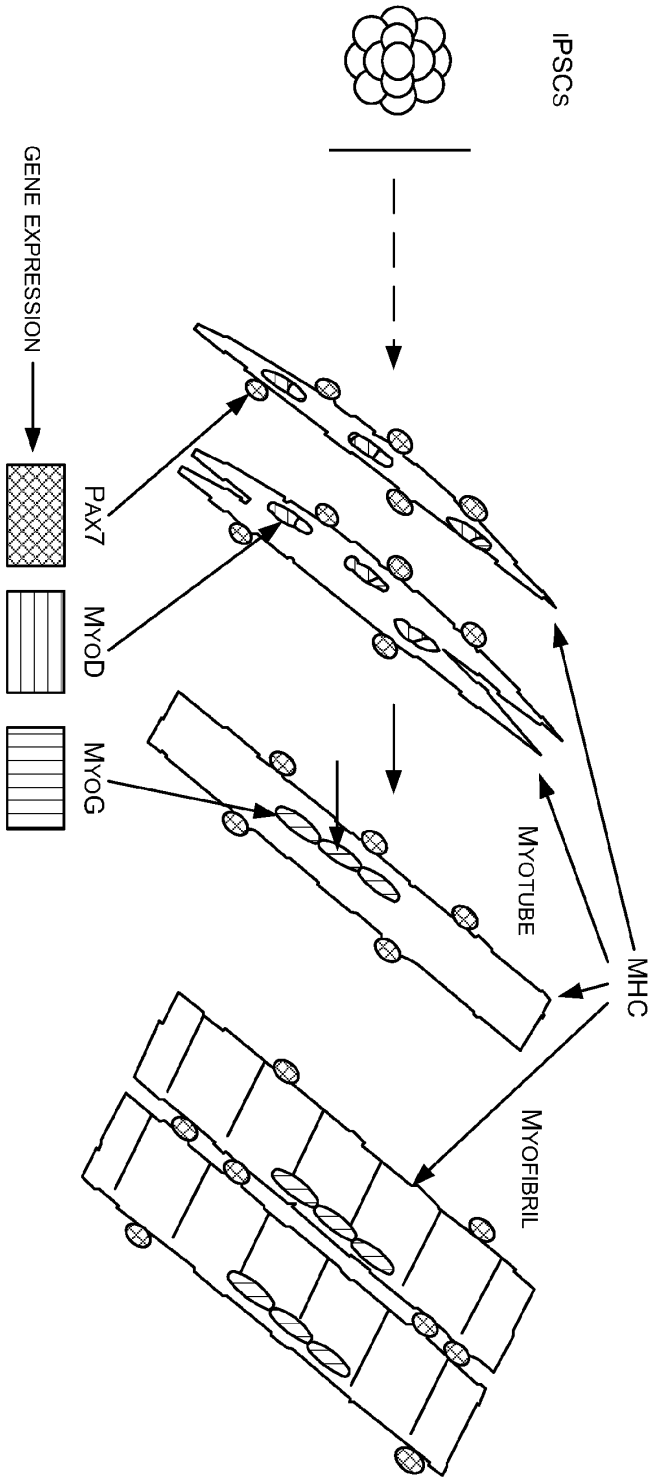

iPSCs
GENE EXPRESSION
PAX7
MYOD
MYOG
MYOTUBE
MHC
MYOFIBRIL

FIG. 3

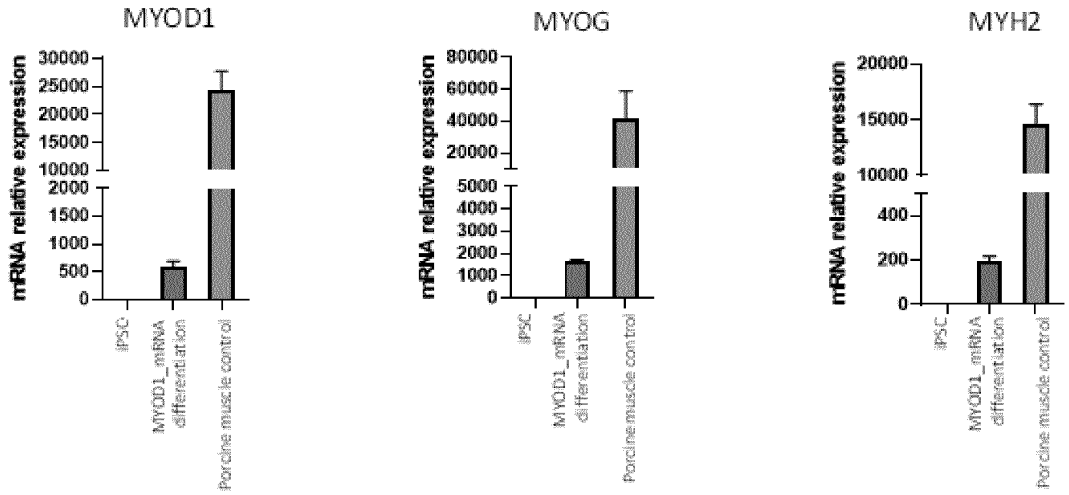

MYOD1
mRNA relative expression
30000
25000
20000
15000
10000
2000
1500
1000
500
0
iPSC
MYOD1_mRNA differentiation
Porcine muscle control
MYOG
mRNA relative expression
80000
60000
40000
20000
5000
4000
3000
2000
1000
0
iPSC
MYOD1_mRNA differentiation
Porcine muscle control
MYH2
mRNA relative expression
20000
15000
10000
400
200
0
iPSC
MYOD1_mRNA differentiation
Porcine muscle control

FIG. 4

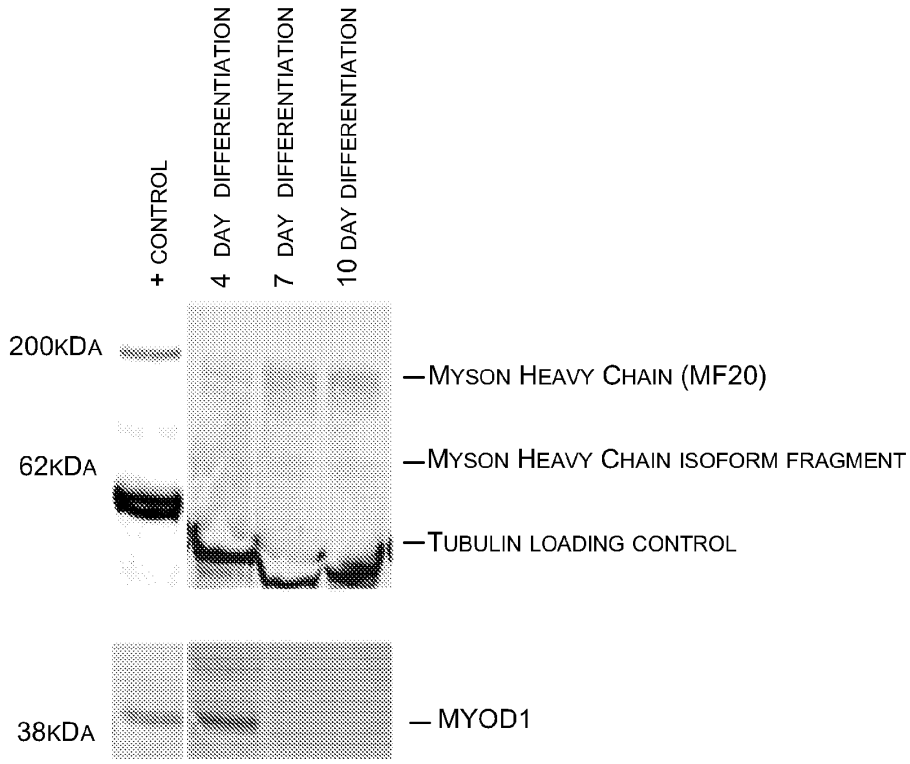

+ CONTROL
4 DAY DIFFERENTIATION
7 DAY DIFFERENTIATION
10 DAY DIFFERENTIATION
200KDA
62KDA
38KDA
—MYSON HEAVY CHAIN (MF20)
—MYSON HEAVY CHAIN ISOFORM FRAGMENT
—TUBULIN LOADING CONTROL
— MYOD1

FIG. 5

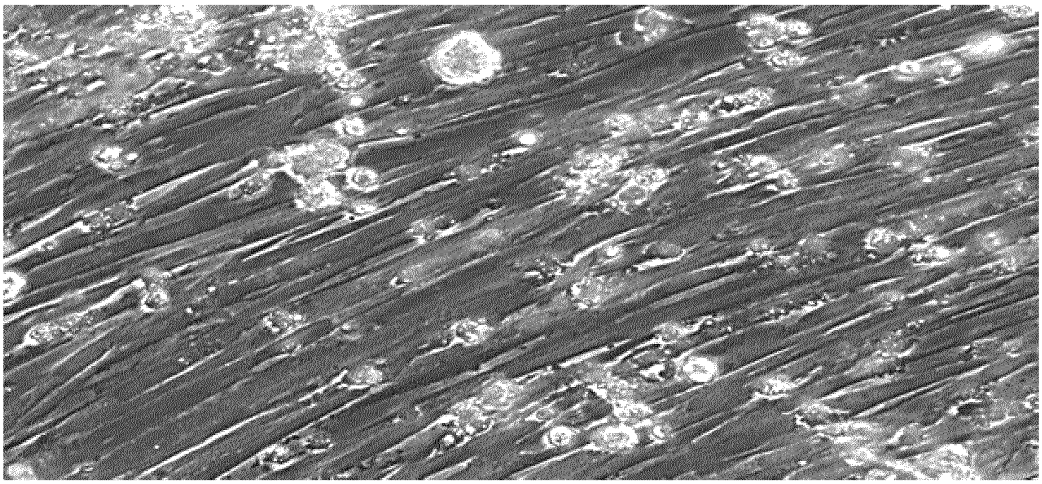


FIG. 6

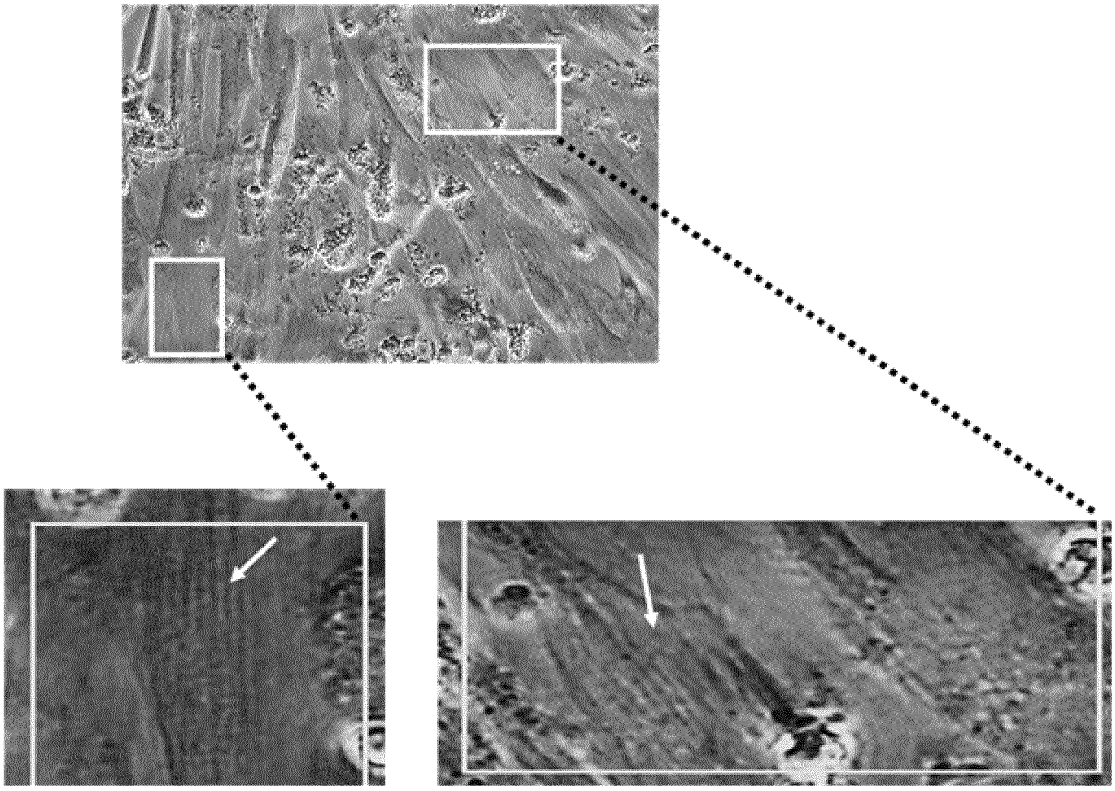


FIG. 7