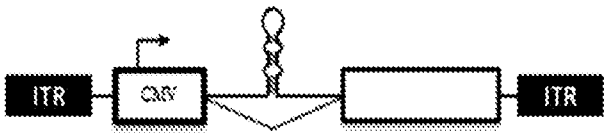
Figure 1

scAAVrh.74.CMV.miR29c



SEQ ID NO: 2: miR-29C IN A miR-30 BACKBONE

GGCCGGCC*tgtttgaatgaggcttcagtactttacagaat*CGTTGCCTGCACATCTTGGAAACACTTGCTGGGATTACT
TCTTCAGGTTAACCCAACAGAAGGCTCGAGAAGGTATATTGCTGTTGACAGTGAGCGCAACCGA
TTTCAAATGGTGCTAGAGTGAAGCCACAGATGTCTAGCACCATTTGAAATCGGTTATGCCTACTG
CCTCGGAATTCAAGGGGCTACTTTAGGAGCAATTATCTTGTTTACTAAAACTGAATACCTTGCTA
TCTCTTTGATACATTGGCCGGCC

FSE-I cut site (restriction site)
miR-30 backbone
miR-30 stem loop (GTGAAGCCACAGATG; SEQ ID NO: 5)
miR-29c target (sense) strand (ACCGATTTCAAATGGTGCTAGA; SEQ ID NO:3))
miR-29c guide (antisense) strand (TCTAGCACCATTTGAAATCGGTTA; SEQ ID NO: 4)

Predicted hairpin structure (SEQ ID NO:6)

```
    G  UUGA      A   C                        -----    A
---U CUG    CAGUG GCG AACCGAUUUCAAAUGGUGCUAGA      GUG A
   | |||    ||||| ||| ||||||||||||||||||||||      |||  >
---A GGC    GUCAU CGU UUGGCUAAAGUUUACCACGAUCU      CAC G
    A   UCC      C   A                          GUAGA  C
```

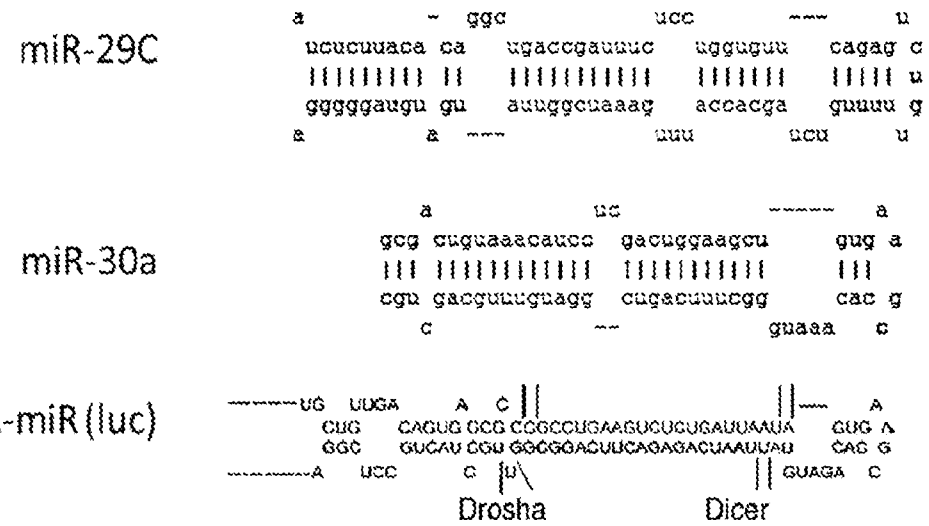


Figure 2A

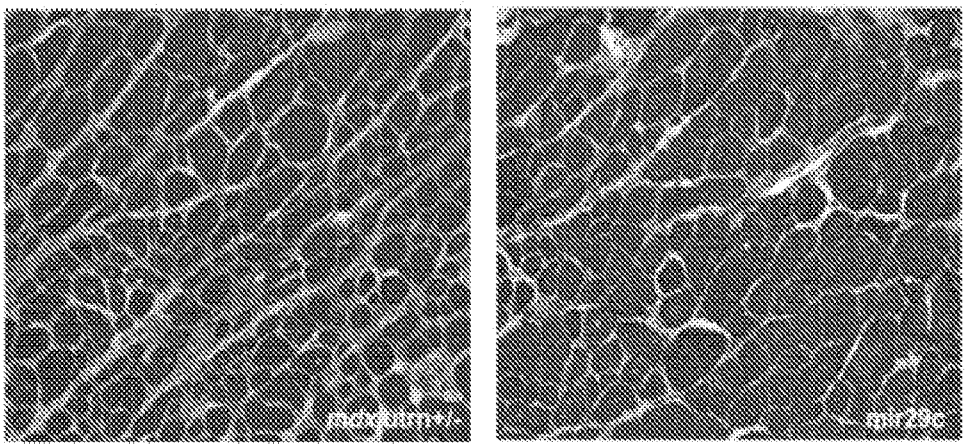


Figure 2B

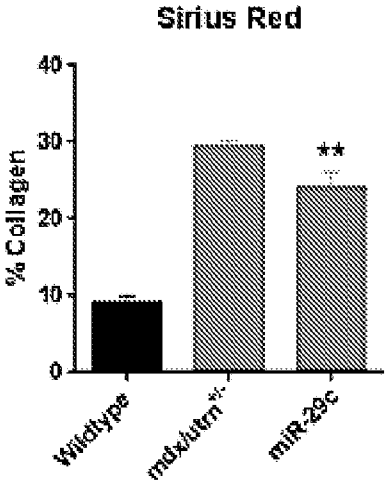


Figure 2C

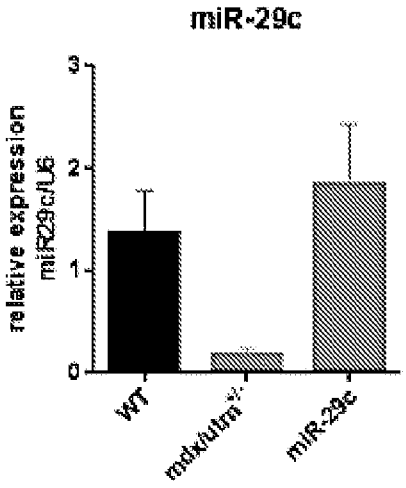


Figure 3A

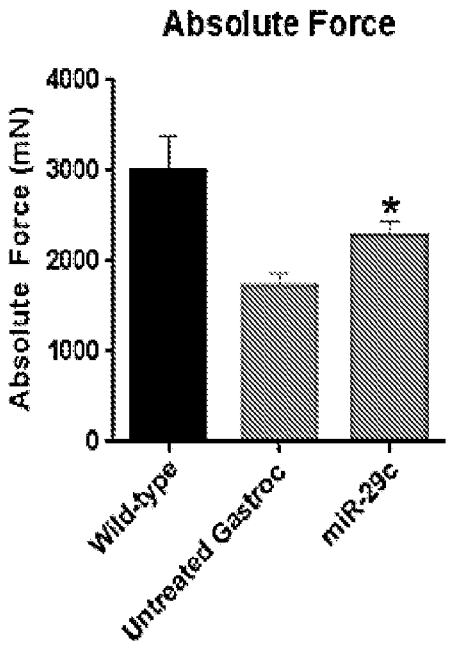


Figure 3B

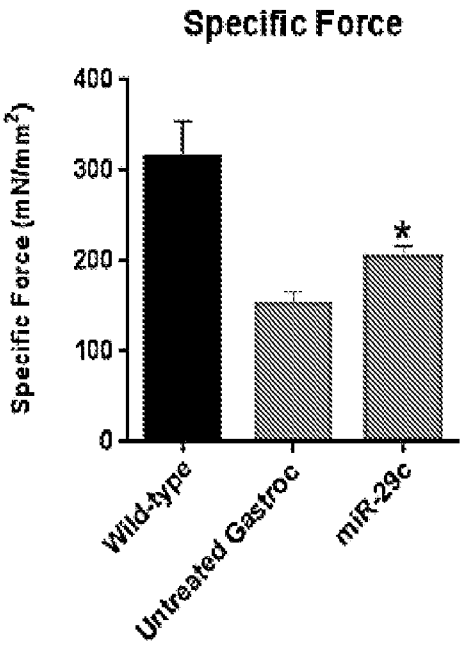


Figure 3C

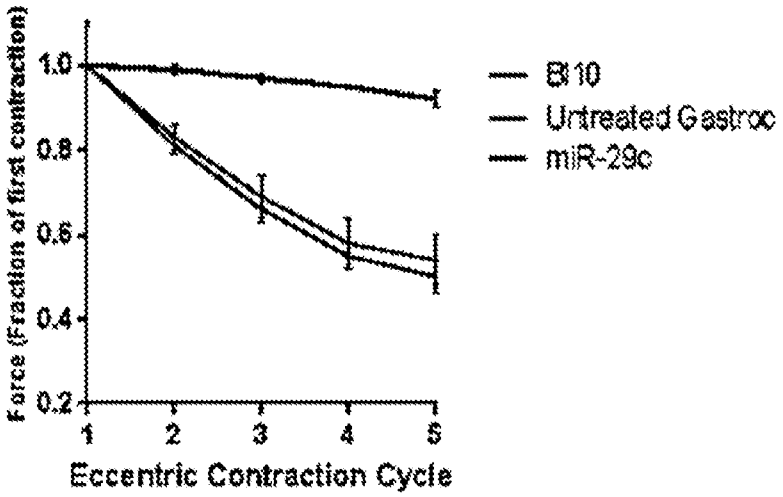


Figure 4C

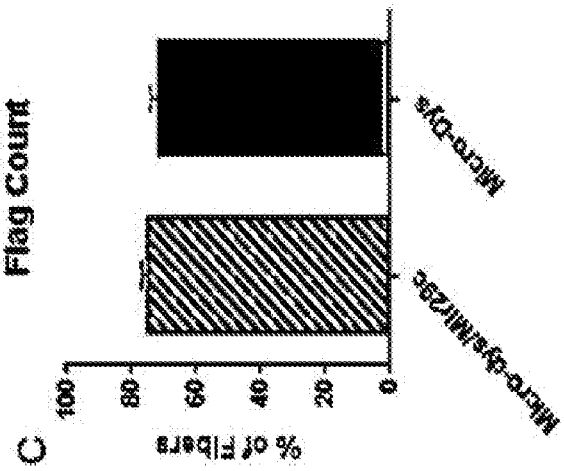


Figure 4B

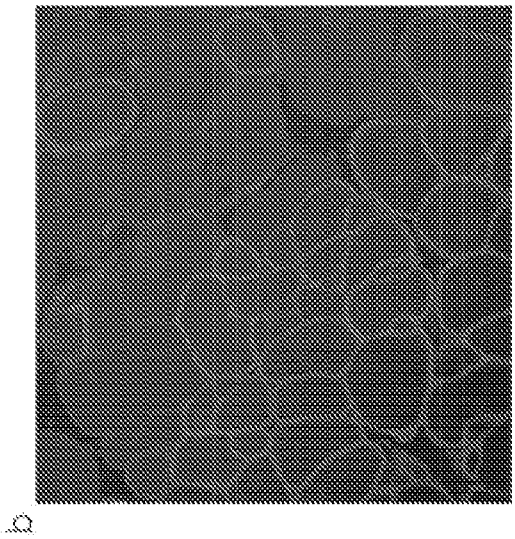


Figure 4A

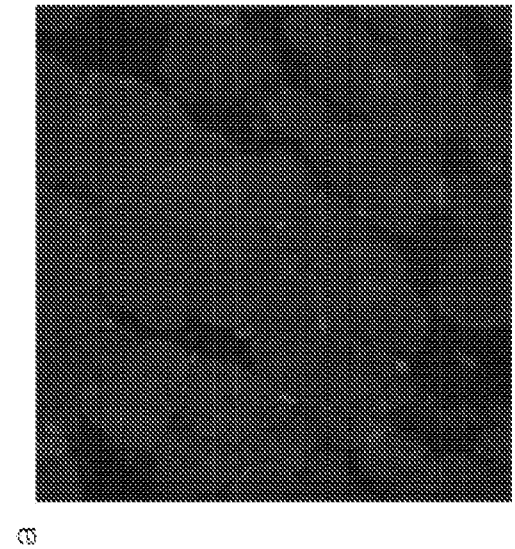


Figure 5A

Figure 5B

Figure 5C

Figure 6A

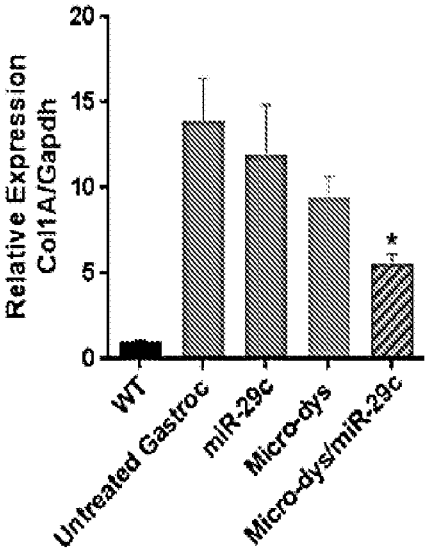


Figure 6B

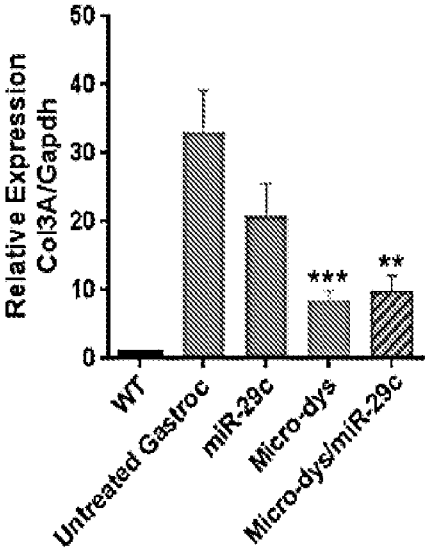


Figure 6C

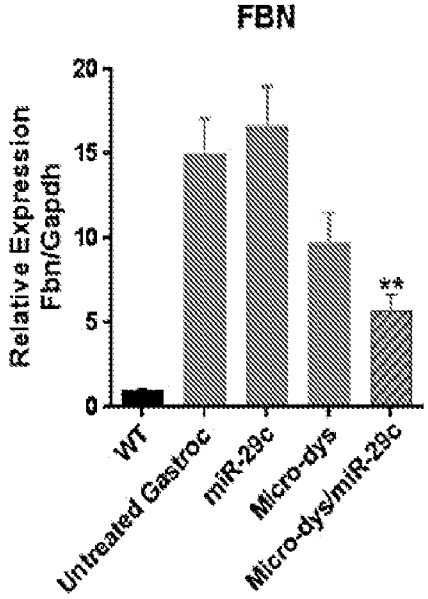


Figure 6D

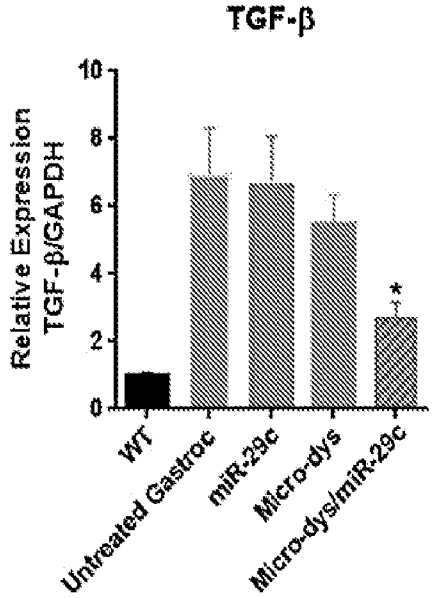


Figure 7A

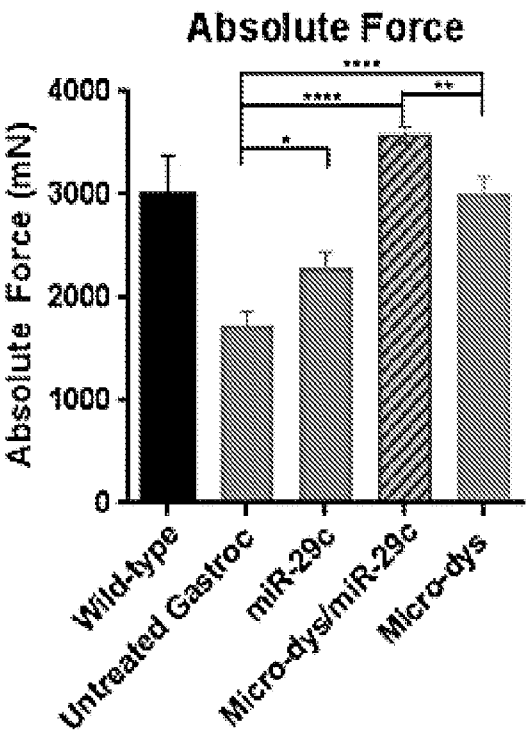


Figure 7B

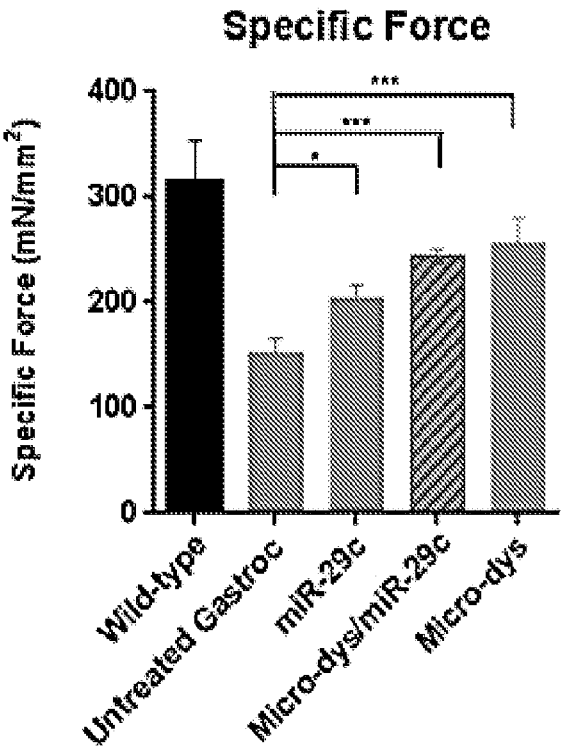


Figure 7C

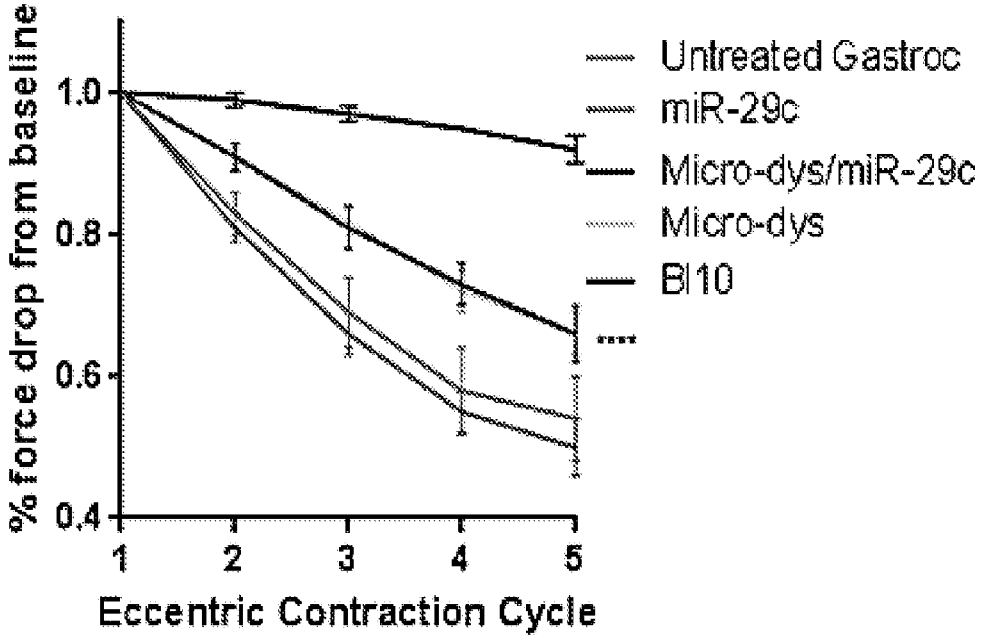


Figure 8

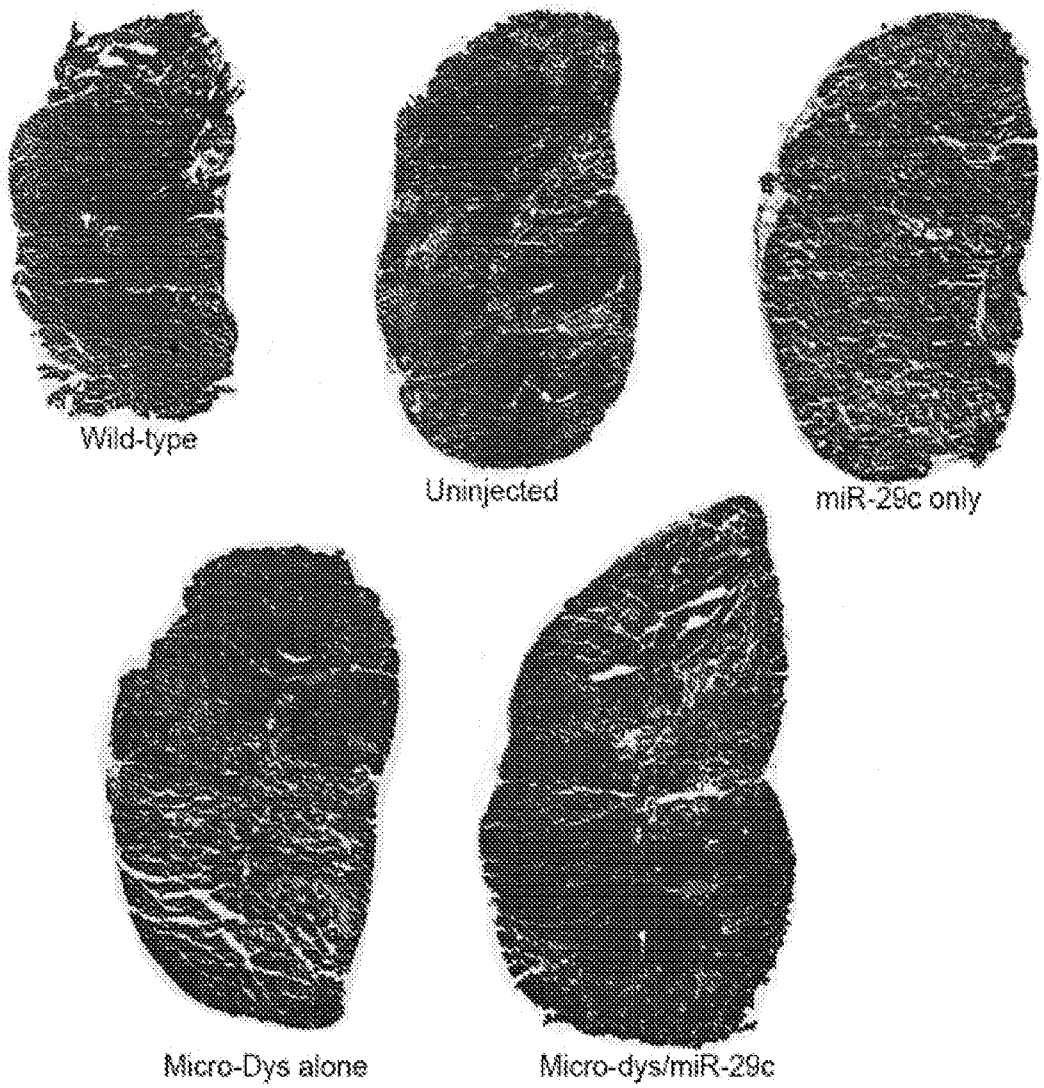

Wild-type
Uninjected
miR-29c only
Micro-Dys alone
Micro-dys/miR-29c

Figure 9A
Gas Weight

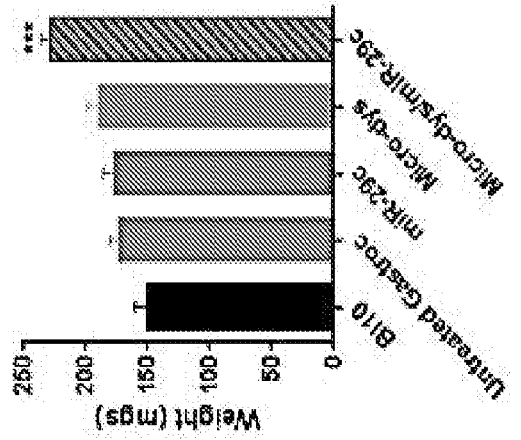


Figure 9B
Fiber Diameters

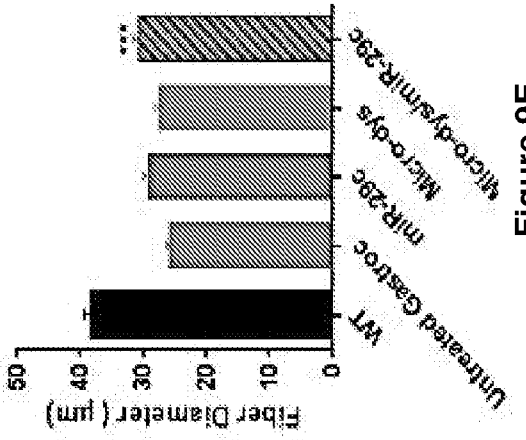


Figure 9C
Histogram of all diameters

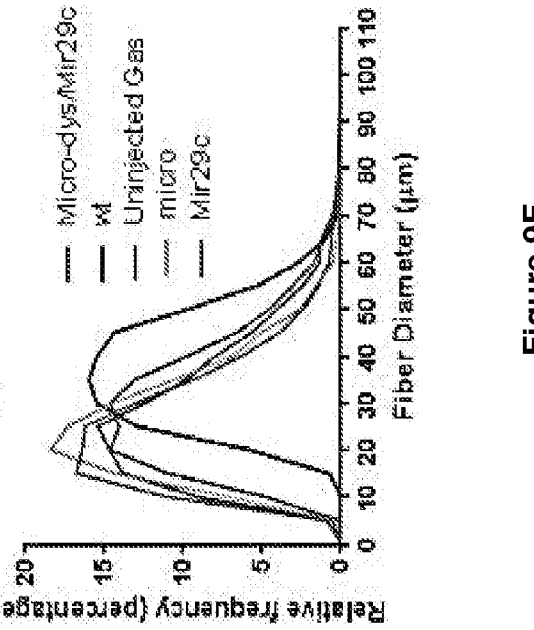


Figure 9D
Total Area

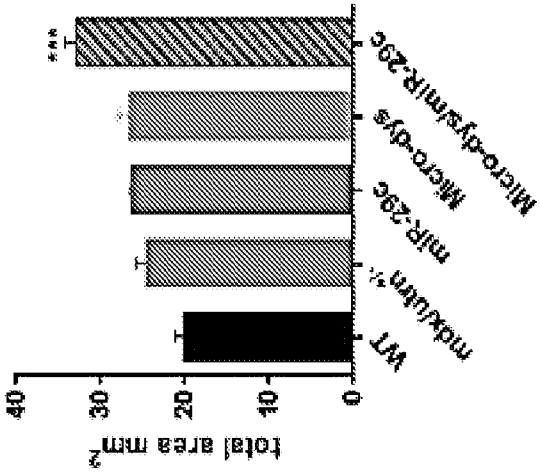


Figure 9E
total number of fibers

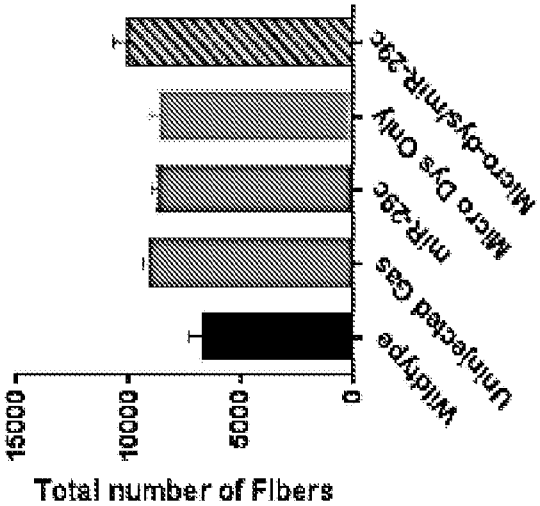


Figure 9F
Muscle Fibers/mm^2

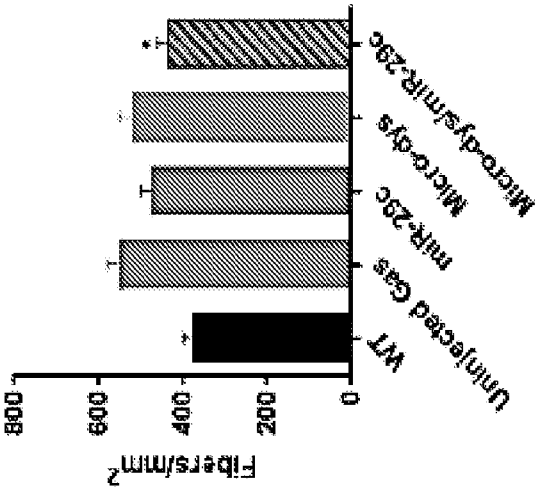
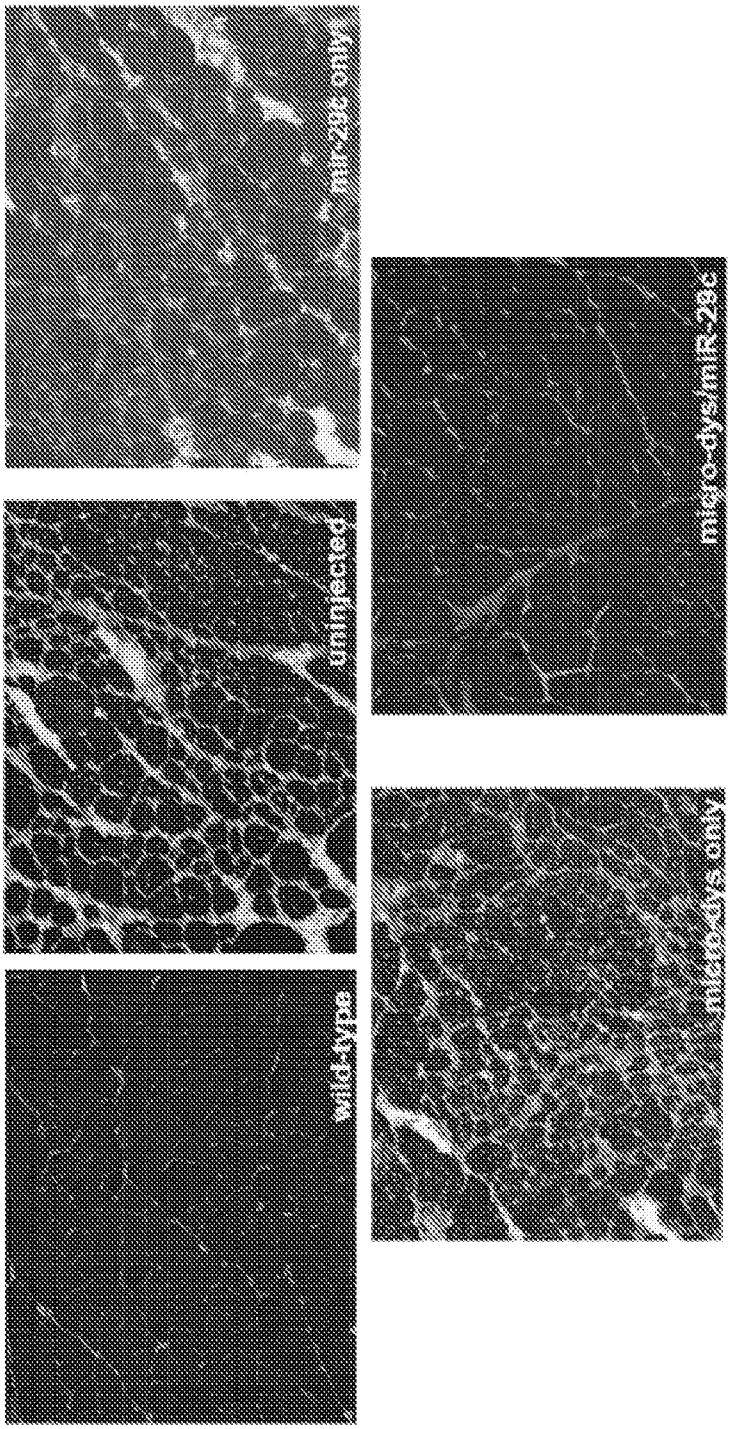


Figure 10A


wild-type
uninjected
mir-23c only
micro-dys only
micro-dys/miR-23c

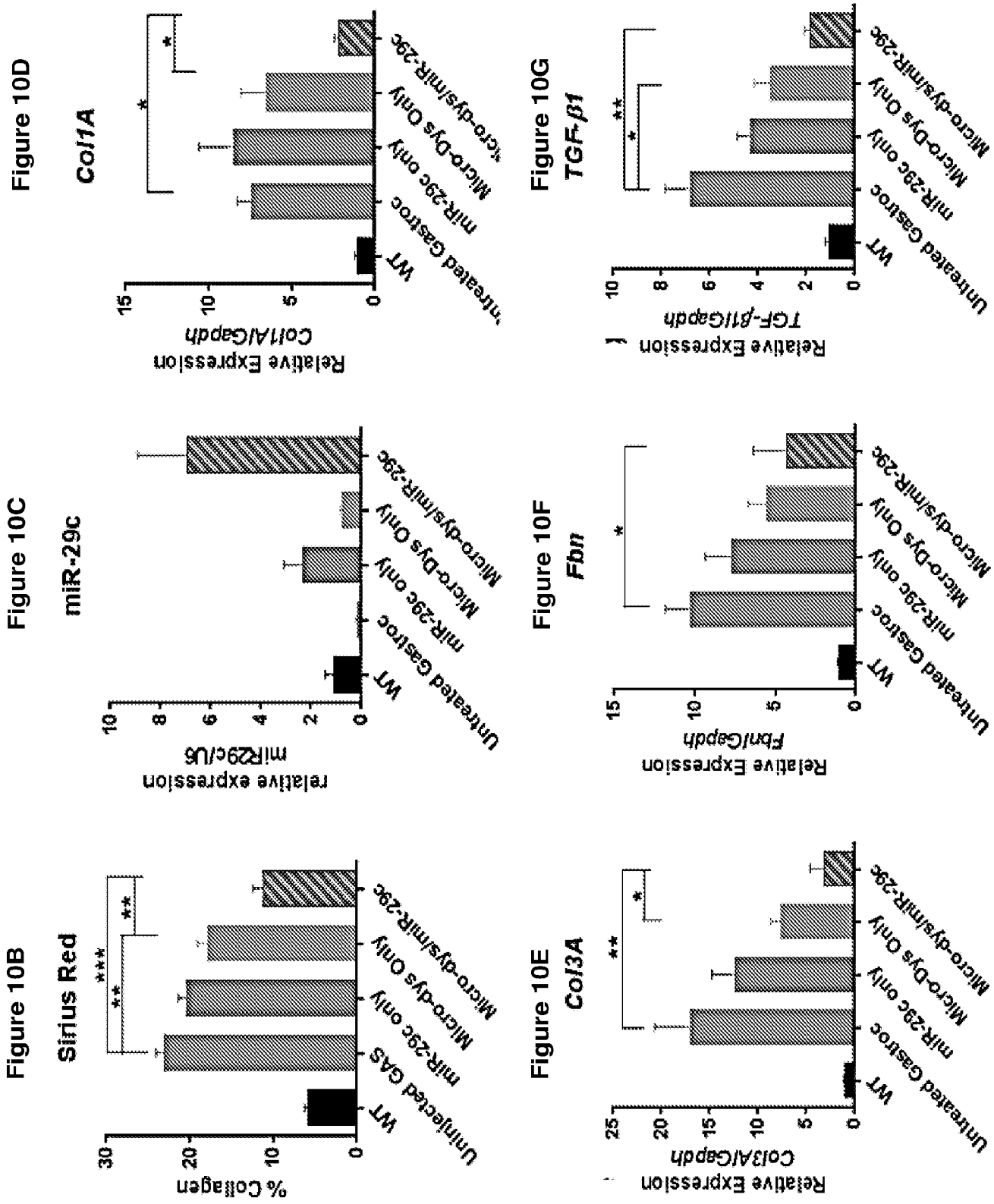

Figure 10B
Sirius Red
% Collagen
Uninjected GAS
WT
miR-29c only
Micro-dys Only
Micro-dys/miR-29c
Figure 10C
miR-29c
relative expression
miR29c/U6
Untreated Gastroc
WT
miR-29c only
Micro-Dys Only
Micro-dys/miR-29c
Figure 10D
Col1A
Relative Expression
Col1A/Gapdh
Untreated Gastroc
WT
miR-29c only
Micro-Dys Only
Micro-dys/miR-29c
Figure 10E
Col3A
Relative Expression
Col3A/Gapdh
Untreated Gastroc
WT
miR-29c only
Micro-Dys Only
Micro-dys/miR-29c
Figure 10F
Fbn
Relative Expression
Fbn/Gapdh
Untreated Gastroc
WT
miR-29c only
Micro-Dys Only
Micro-dys/miR-29c
Figure 10G
TGF-β1
Relative Expression
TGF-β1/Gapdh
Untreated Gastroc
WT
miR-29c only
Micro-Dys Only
Micro-dys/miR-29c

Figure 11

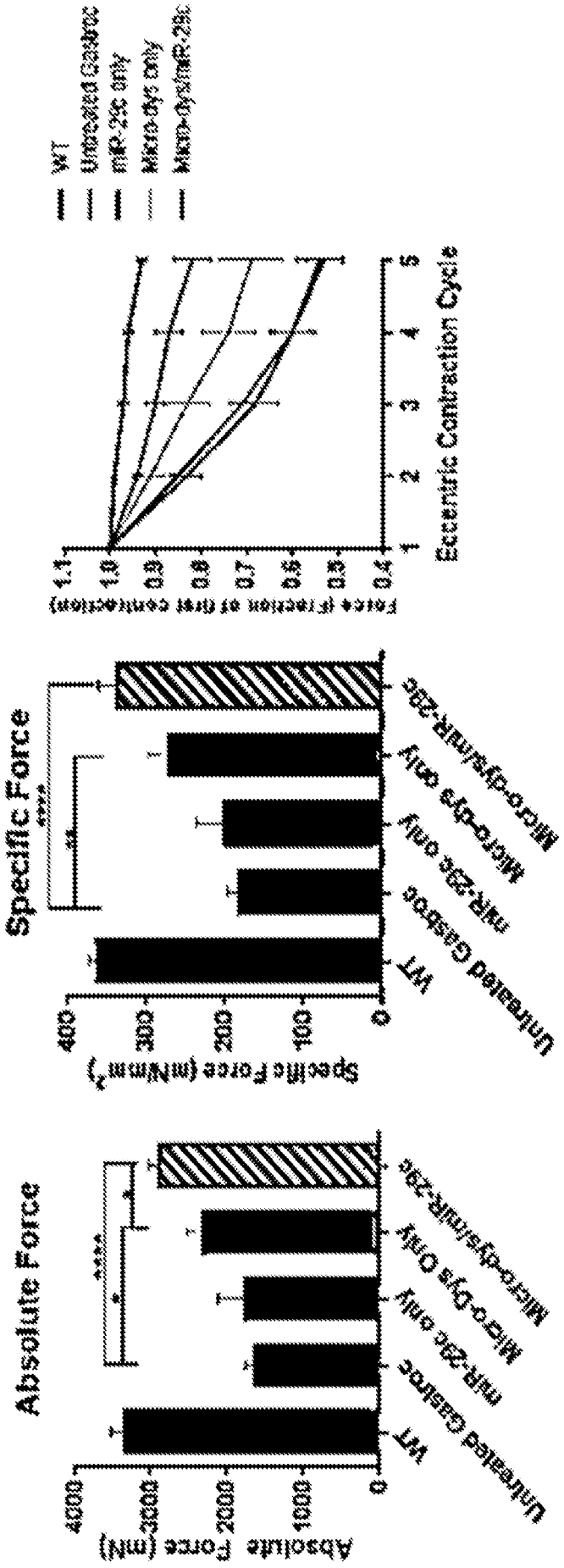

WT
Untreated Gastroc
miR-29c only
Micro-dys only
Micro-dysmiR-29c
Force (f ireation of first contraction)
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
1
2
3
4
5
Eccentric Contraction Cycle
Specific Force
****
**
Specific Force (mN/mm²)
400
300
200
100
0
WT
Untreated Gastroc
miR-29c only
Micro-dys only
Micro-dysmiR-29c
Absolute Force
****
Absolute Force (mN)
4000
3000
2000
1000
0
WT
Untreated Gastroc
miR-29c only
Micro-Dys Only
Micro-dysmiR-29c

Figure 12

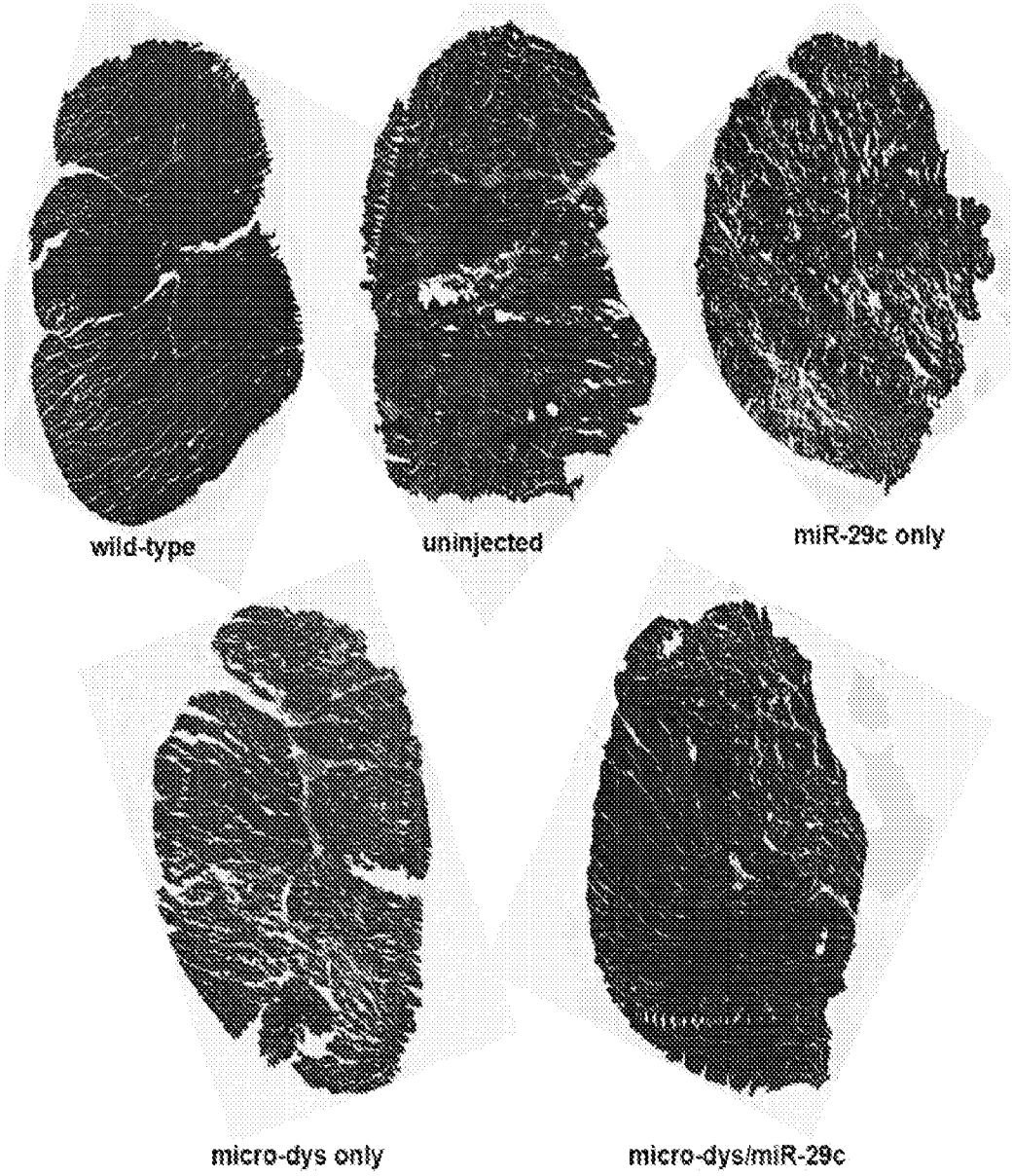
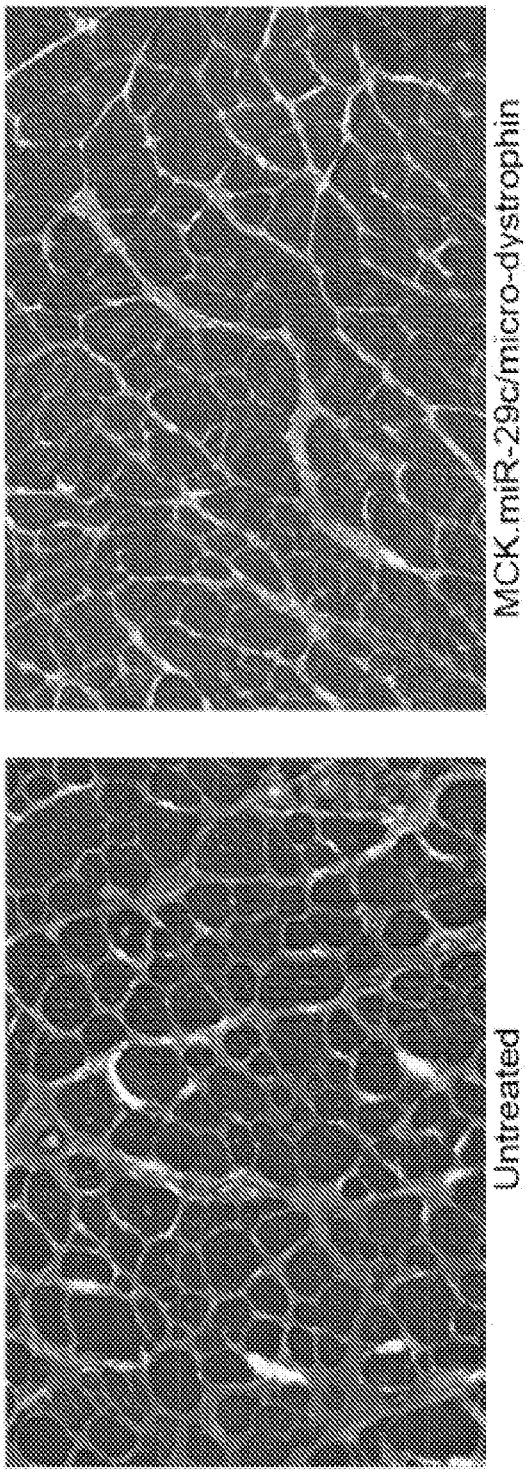
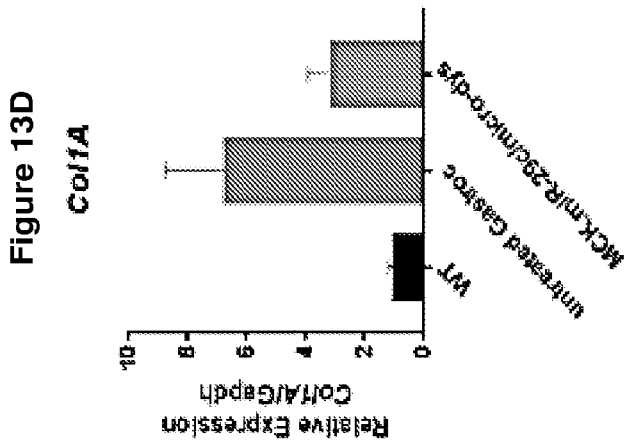
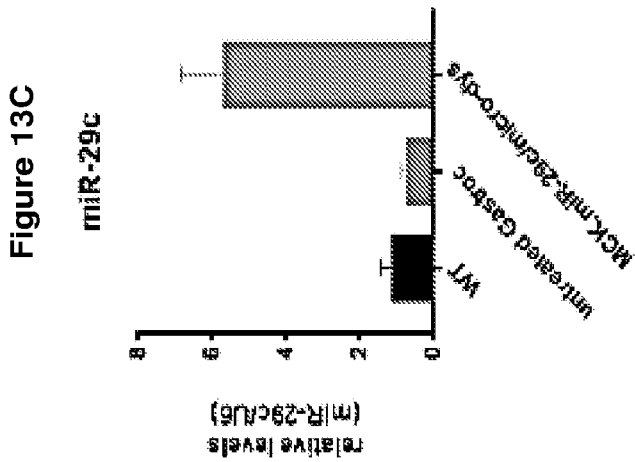
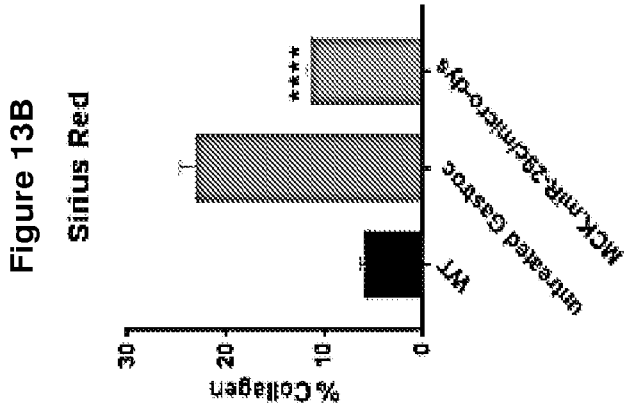

wild-type
uninjected
miR-29c only
micro-dys only
micro-dys/miR-29c

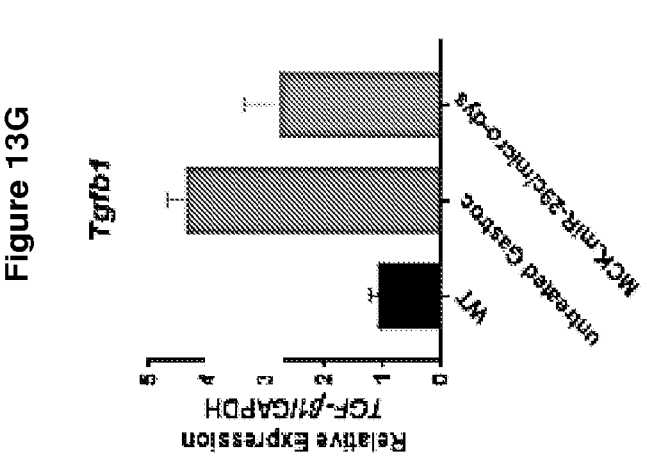
Figure 13A

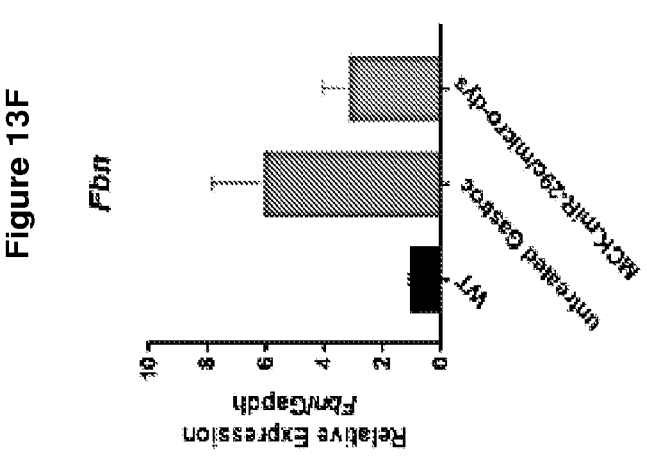


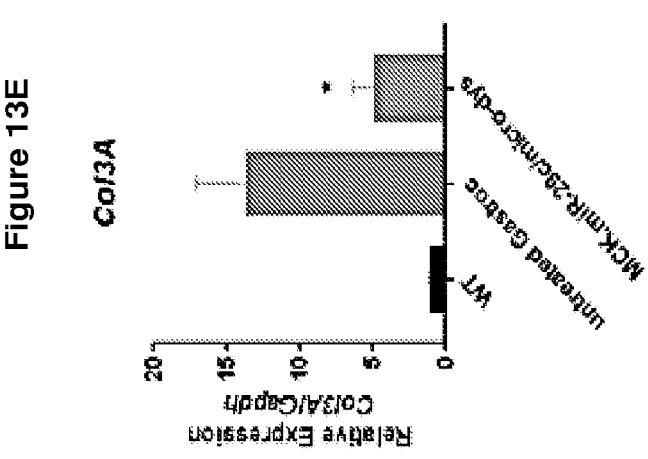

Figure 13D
Col1A
Relative Expression
Col1A/Gapdh
WT
untreated Gastroc
MCK.miR.29c/micro-dys


Figure 13C
miR-29c
relative levels
(miR-29cΔU6)
WT
untreated Gastroc
MCK.miR.29c/micro-dys


Figure 13B
Sirius Red
% Collagen
****
WT
untreated Gastroc
MCK.miR.29c/micro-dys


Figure 13G
Tgfb1
Relative Expression
TGF-β1/GAPDH
WT
untreated Gastroc
MCK.miR.29c/micro-dys


Figure 13F
Fbn
Relative Expression
Fbn/Gapdh
WT
untreated Gastroc
MCK.miR.29c/micro-dys


Figure 13E
Col3A
Relative Expression
Col3A/Gapdh
*
WT
untreated Gastroc
MCK.miR.29c/micro-dys

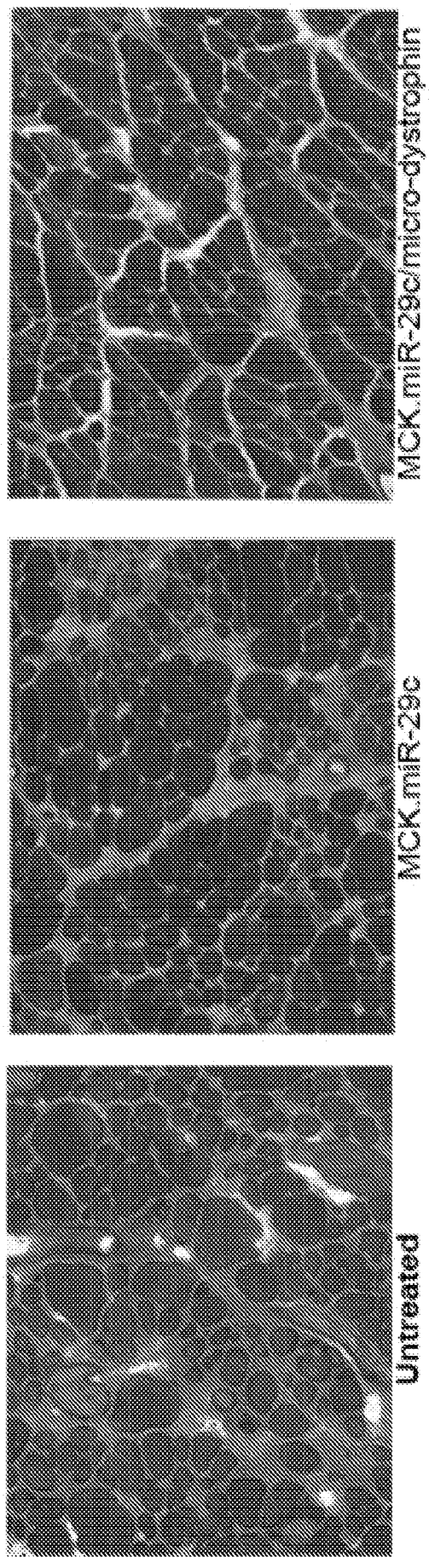


Figure 14A

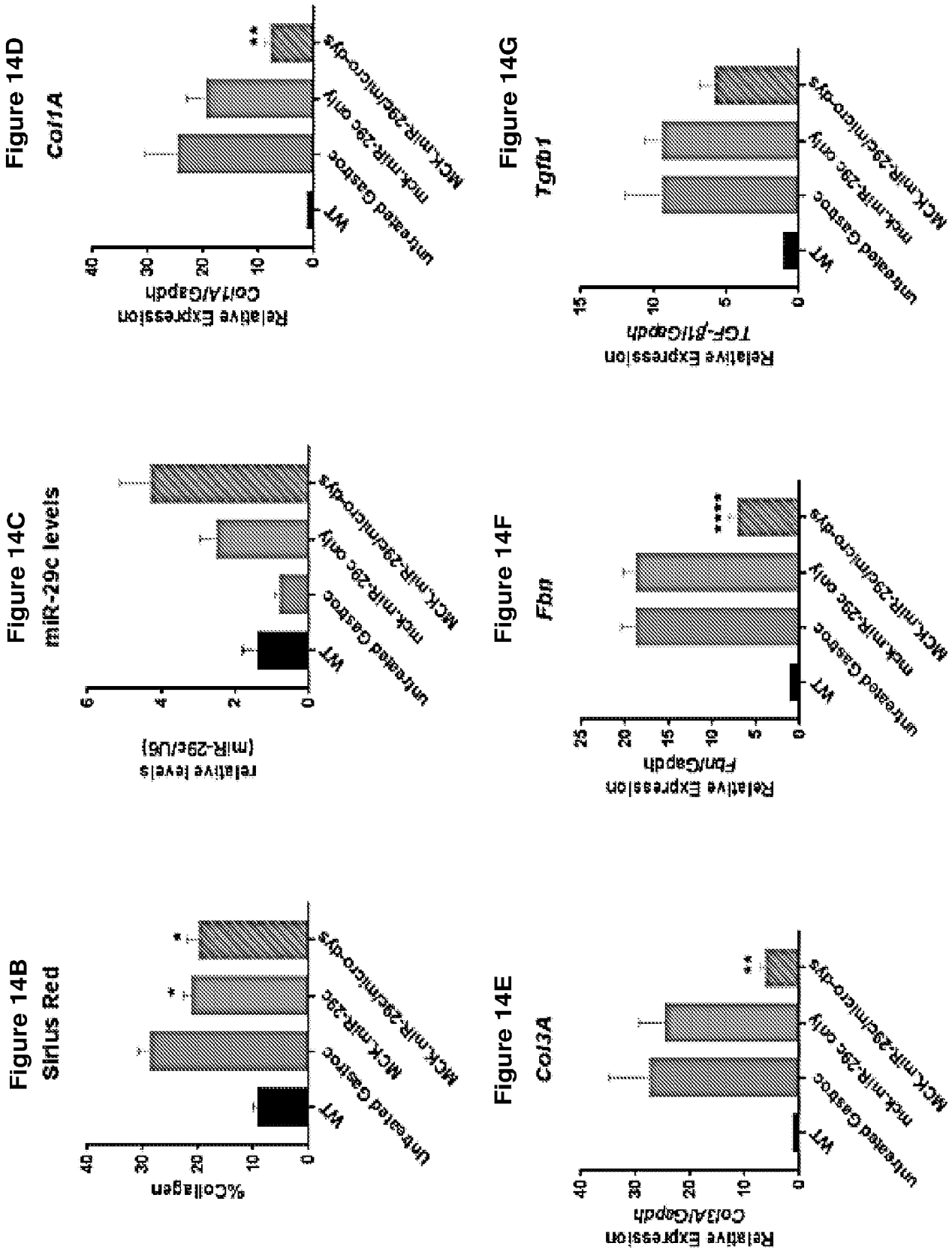

Figure 14B
Sirius Red
%Collagen
unbeated
WT
Gastroc
Mck.miR-29c
MCK.miR-29c/micro-dys
Figure 14C
miR-29c levels
relative levels
(miR-29c/U6)
Figure 14D
Col1A
Relative Expression
Col1A/Gapdh
Figure 14E
Col3A
Relative Expression
Col3A/Gapdh
Figure 14F
Fbn
Relative Expression
Fbn/Gapdh
Figure 14G
Tgfb1
Relative Expression
TGF-β1/Gapdh

Figure 15A

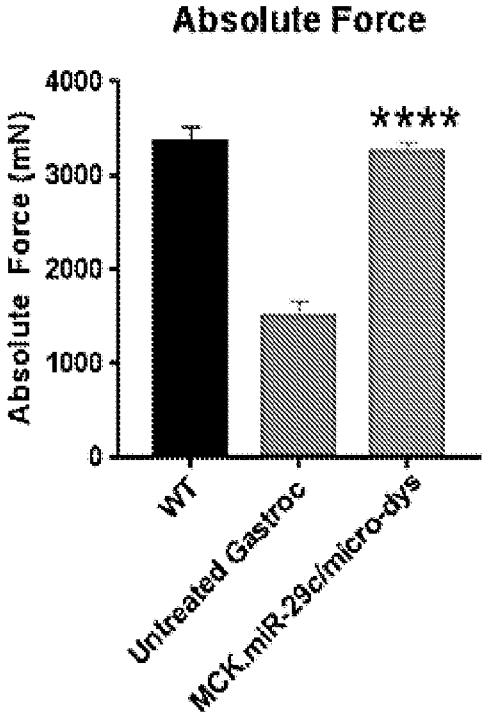


Figure 15B

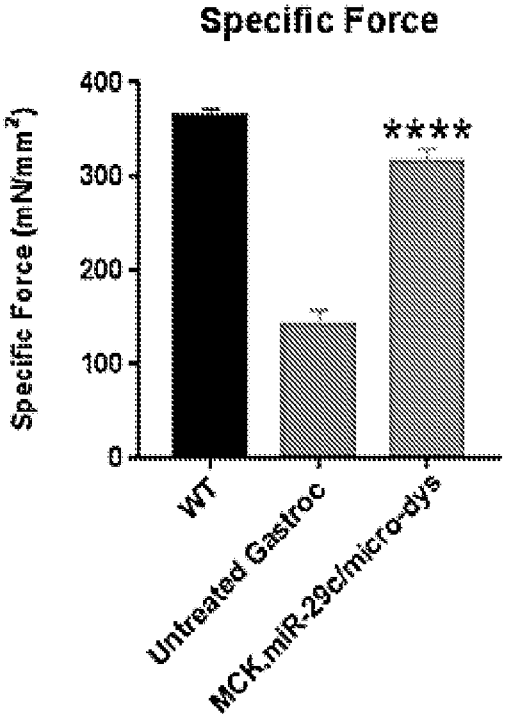


Figure 15C

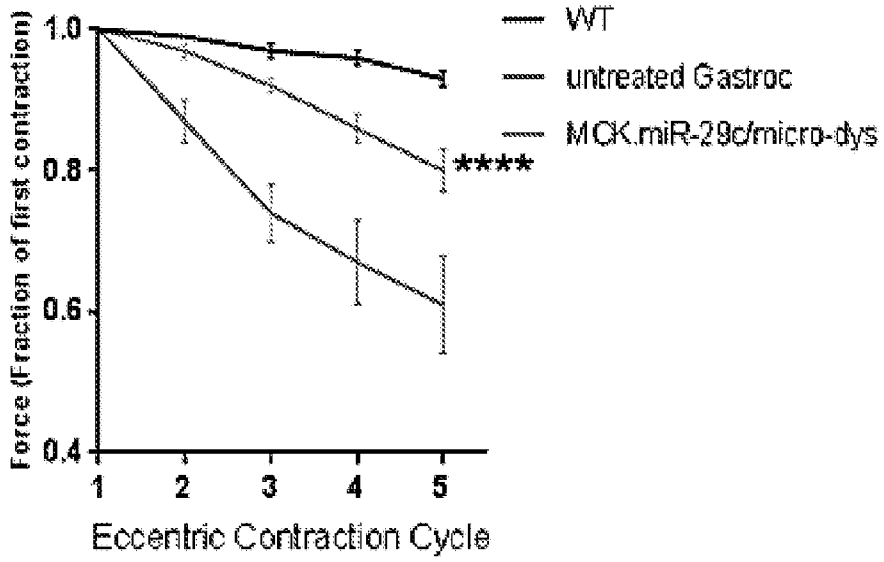


Figure 16A

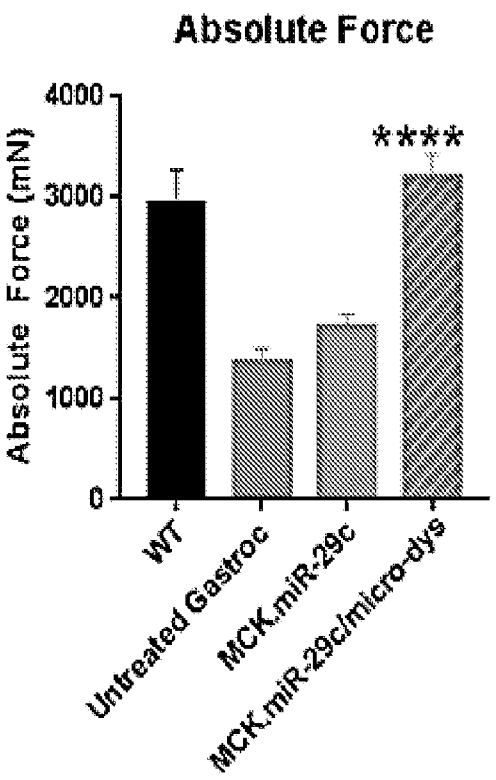


Figure 16B

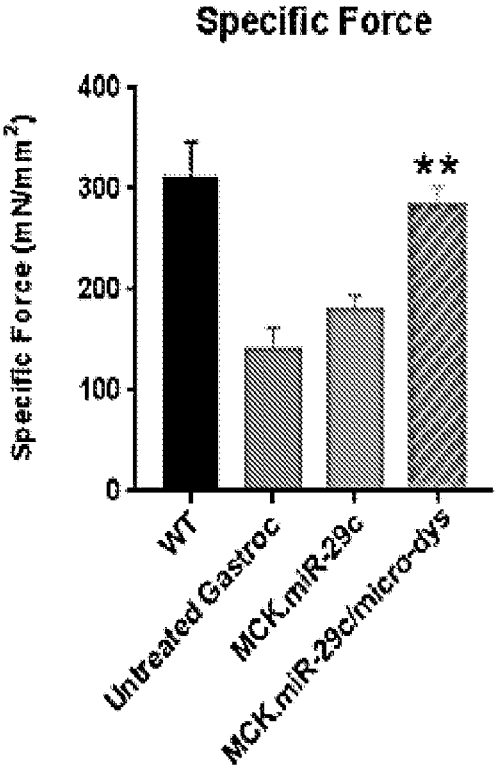


Figure 16C

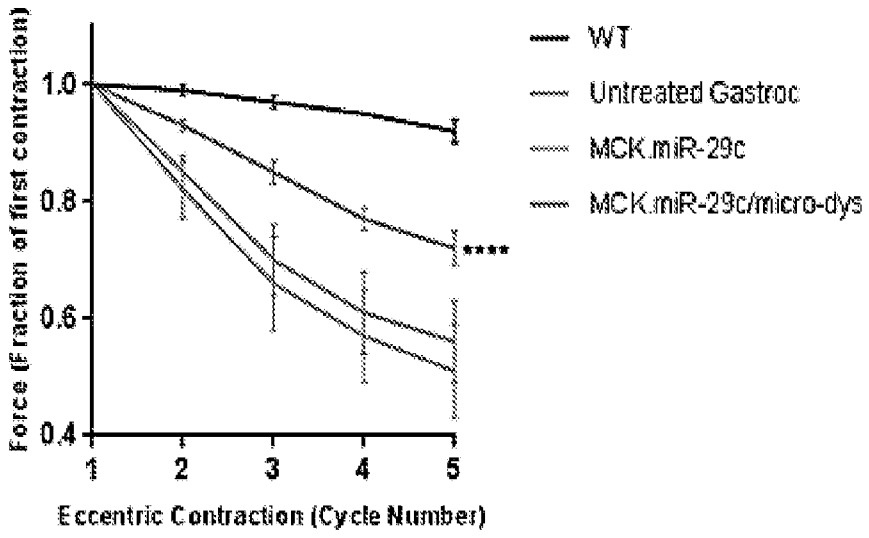


Figure 17A

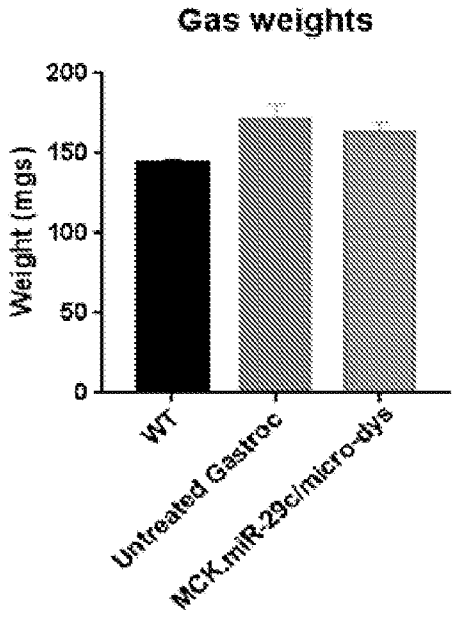


Figure 17B

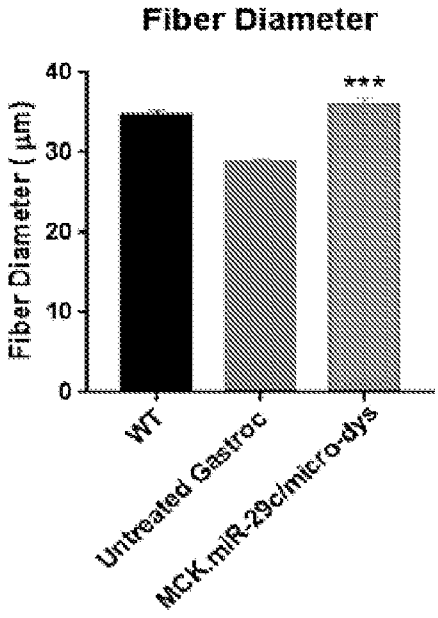


Figure 17C

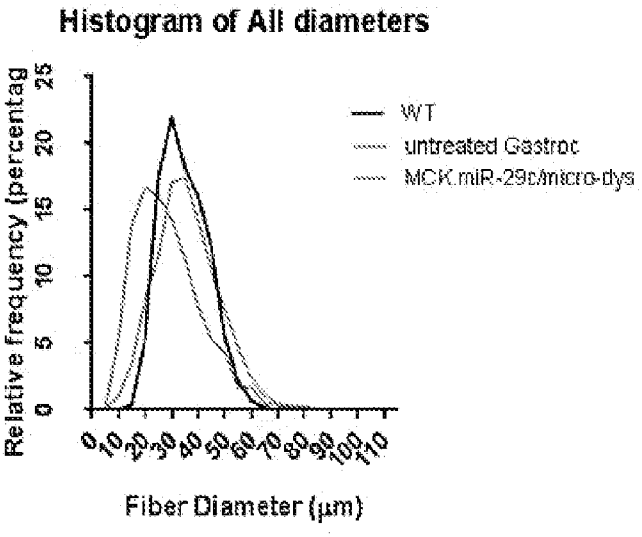


Figure 17D

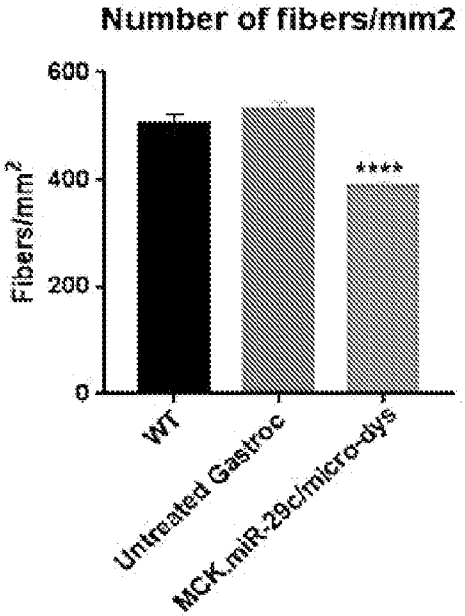


Figure 18A

pAAV.CMV.miR29C Sequence (SEQ ID NO: 1)

Main features:
CMV promoter- 120-526
EF1a Intron- 927-1087, 1380-1854
miR-29c- 1257-1284
shRNA-miR29-c with primary seed sequence- 1088-1375
PolyA- 1896-2091

CAGCAGCTGCGCGCTCGCTCGCTCACTGAGGCCGCCCGGGCAAAGCCCGGGCGTCGGGCGACCTTTGGTCGCCCG
GCCTCAGTGAGCGAGCGAGCGCGCAGAGAGGGAGTGGGGTTAAACTCGTTACATAACTTACGGTAAATGGCCCG
CCTGGCTGACCGCCCAACGACCCCCGCCCATTGACGTCAATAATGACGTATGTTCCCATAGTAACGCCAATAGGGA
CTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCCACTTGGCAGTACATCAAGTGTATCATATGCC
AAGTACGCCCCCTATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCCCAGTACATGACCTTATGGGAC
TTTCCTACTTGGCAGTACATCTACGTATTAGTCATCGCTATTACCATGGTGATGCGGTTTTGGCAGTACATCAATGG
GCGTGGATAGCGGTTTGACTCACGGGGATTTCCAAGTCTCCACCCCATTGACGTCAATGGGAGTTTGTTTTGGCAC
CAAAATCAACGGGACTTTCCAAAATGTCGTAACAACTCCGCCCCATTGACGCAAATGGGCGGTAGGCGTGTACGG
TGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGAACCGTCAGATCGCCTGGAGACGCCATCCACGCTGTTTTGACC
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CTCCTCAGTGGATGTTGCCTTTACTTCTAGGCCTGTACGGAAGTGTTACTTCTGCTCTAAAAGCTGCGGAATTGTAC
CCGGGGCCGATCCACCGGTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGGTAAGTGCCGTGTGTGGTTCCCG
CGGGCGGCGACGGGGCCCGTGCGTCCCAGCGCACATGTTCGGCGAGGCGGGGCCTGCGAGCGCGGCCACCGAG
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ACAGTGAGCGCAACCGATTTCAAATGGTGCTAGAGTGAAGCCACAGATGTCTAGCACCATTTGAAATCGGTTATG
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TGATACATTGGCCGGCCTGCTCTGGTGCCTGGCCTCGCGCCGCCGTGTATCGCCCCGCCCTGGGCGGCAAGGCTG
GCCCGGTCGGCACCAGTTGCGTGAGCGGAAAGATGGCCGCTTCCCGGCCCTGCTGCAGGGAGCTCAAAATGGAG
GACGCGGCGCTCGGGAGAGCGGGCGGGTGAGTCACCCACACAAAGGAAAAGGGCCTTTCCGTCCTCAGCCGTCG
CTTCATGTGACTCCACGGAGTACCGGGCGCCGTCCAGGCACCTCGATTAGTTCTCGAGCTTTTGGAGTACGTCGTC
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GCTCACTGAGGCCGGGCGACCAAAGGTCGCCCGACGCCCGGGCTTTGCCCGGGCGGCCTCAGTGAGCGAGCGAG
CGCGCCAGCTGGCGTAATAGCGAAGAGGCCCGCACCGATCGCCCTTCCCAACAGTTGCGCAGCCTGAATGGCGAA
TGGAATTCCAGACGATTGAGCGTCAAAATGTAGGTATTTCCATGAGCGTTTTTCCTGTTGCAATGGCTGGCGGTAA
TATTGTTCTGGATATTACCAGCAAGGCCGATAGTTTGAGTTCTTCTACTCAGGCAAGTGATGTTATTACTAATCAAA
GAAGTATTGCGACAACGGTTAATTTGCGTGATGGACAGACTCTTTTACTCGGTGGCCTCACTGATTATAAAAACAC
TTCTCAGGATTCTGGCGTACCGTTCCTGTCTAAAATCCCTTTAATCGGCCTCCTGTTTAGCTCCCGCTCTGATTCTAA
CGAGGAAAGCACGTTATACGTGCTCGTCAAAGCAAC

Figure 18B

CATAGTACGCGCCCTGTAGCGGCGCATTAAGCGCGGCGGGTGTGGTGGTTACGCGCAGCGTGACCGCTACACTTG
CCAGCGCCCTAGCGCCCGCTCCTTTCGCTTTCTTCCCTTCCTTTCTCGCCACGTTCGCCGGCTTTCCCCGTCAAGCTCT
AAATCGGGGGCTCCCTTTAGGGTTCCGATTTAGTGCTTTACGGCACCTCGACCCCAAAAAACTTGATTAGGGTGAT
GGTTCACGTAGTGGGCCATCGCCCTGATAGACGGTTTTTCGCCCTTTGACGTTGGAGTCCACGTTCTTTAATAGTG
GACTCTTGTTCCAAACTGGAACAACACTCAACCCTATCTCGGTCTATTCTTTTGATTTATAAGGGATTTTGCCGATTT
CGGCCTATTGGTTAAAAAATGAGCTGATTTAACAAAAATTTAACGCGAATTTTAACAAAATATTAACGTTTACAATT
TAAATATTTGCTTATACAATCTTCCTGTTTTTGGGGCTTTTCTGATTATCAACCGGGGTACATATGATTGACATGCTA
GTTTTACGATTACCGTTCATCGATTCTCTTGTTTGCTCCAGACTCTCAGGCAATGACCTGATAGCCTTTGTAGAGACC
TCTCAAAAATAGCTACCCTCTCCGGCATGAATTTATCAGCTAGAACGGTTGAATATCATATTGATGGTGATTTGACT
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AAAAATTTTTATCCTTGCGTTGAAATAAAGGCTTCTCCCGCAAAAGTATTACAGGGTCATAATGTTTTTGGTACAAC
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GGAATTCCTGATGCGGTATTTTCTCCTTACGCATCTGTGCGGTATTTCACACCGCATATGGTGCACTCTCAGTACAA
TCTGCTCTGATGCCGCATAGTTAAGCCAGCCCCGACACCCGCCAACACCCGCTGACGCGCCCTGACGGGCTTGTCT
GCTCCCGGCATCCGCTTACAGACAAGCTGTGACCGTCTCCGGGAGCTGCATGTGTCAGAGGTTTTCACCGTCATCA
CCGAAACGCGCGAGACGAAAGGGCCTCGTGATACGCCTATTTTTATAGGTTAATGTCATGATAATAATGGTTTCTT
AGACGTCAGGTGGCACTTTTCGGGGAAATGTGCGCGGAACCCCTATTTGTTTATTTTTCTAAATACATTCAAATATG
TATCCGCTCATGAGACAATAACCCTGATAAATGCTTCAATAATATTGAAAAAGGAAGAGTATGAGTATTCAACATT
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GTTTTCGCCCCGAAGAACGTTTTCCAATGATGAGCACTTTTAAAGTTCTGCTATGTGGCGCGGTATTATCCCGTATT
GACGCCGGGCAAGAGCAACTCGGTCGCCGCATACACTATTCTCAGAATGACTTGGTTGAGTACTCACCAGTCACA
GAAAAGCATCTTACGGATGGCATGACAGTAAGAGAATTATGCAGTGCTGCCATAACCATGAGTGATAACACTGCG
GCCAACTTACTTCTGACAACGATCGGAGGACCGAAGGAGCTAACCGCTTTTTTGCACAACATGGGGGATCATGTA
ACTCGCCTTGATCGTTGGGAACCGGAGCTGAATGAAGCCATACCAAACGACGAGCGTGACACCACGATGCCTGTA
GCAATGGCAACAACGTTGCGCAAACTATTAACTGGCGAACTACTTACTCTAGCTTCCCGGCAACAATTAATAGACT
GGATGGAGGCGGATAAAGTTGCAGGACCACTTCTGCGCTCGGCCCTTCCGGCTGGCTGGTTTATTGCTGATAAAT
CTGGAGCCGGTGAGCGTGGGTCTCGCGGTATCATTGCAGCACTGGGGCCAGATGGTAAGCCCTCCCGTATCGTAG
TTATCTACACGACGGGGAGTCAGGCAACTATGGATGAACGAAATAGACAGATCGCTGAGATAGGTGCCTCACTGA
TTAAGCATTGGTAACTGTCAGACCAAGTTTACTCATATATACTTTAGATTGATTTAAAACTTCATTTTTAATTTAAAA
GGATCTAGGTGAAGATCCTTTTTGATAATCTCATGACCAAAATCCCTTAACGTGAGTTTTCGTTCCACTGAGCGTCA
GACCCCGTAGAAAAGATCAAAGGATCTTCTTGAGATCCTTTTTTTCTGCGCGTAATCTGCTGCTTGCAAACAAAAAA
ACCACCGCTACCAGCGGTGGTTTGTTTGCCGGATCAAGAGCTACCAACTCTTTTTCCGAAGGTAACTGGCTTCAGC
AGAGCGCAGATACCAAATACTGTCCTTCTAGTGTAGCCGTAGTTAGGCCACCACTTCAAGAACTCTGTAGCACCGC
CTACATACCTCGCTCTGCTAATCCTGTTACCAGTGGCTGCTGCCAGTGGCGATAAGTCGTGTCTTACCGGGTTGGA
CTCAAGACGATAGTTACCGGATAAGGCGCAGCGGTCGGGCTGAACGGGGGGTTCGTGCACACAGCCCAGCTTGG
AGCGAACGACCTACACCGAACTGAGATACCTACAGCGTGAGCTATGAGAAAGCGCCACGCTTCCCGAAGGGAGA
AAGGCGGACAGGTATCCGGTAAGCGGCAGGGTCGGAACAGGAGAGCGCACGAGGGAGCTTCCAGGGGGAAAC
GCCTGGTATCTTTATAGTCCTGTCGGGTTTCGCCACCTCTGACTTGAGCGTCGATTTTTGTGATGCTCGTCAGGGGG
GCGGAGCCTATGGAAAAACGCCAGCAACGCGGCCTTTTTACGGTTCCTGGCCTTTTGCTGGCCTTTTGCTCACATG
TTCTTTCCTGCGTTATCCCCTGATTCTGTGGATAACCGTATTACCGCCTTTGAGTGAGCTGATACCGCTCGCCGCAG
CCGAACGACCGAGCGCAGCGAGTCAGTGAGCGAGGAAGCGGAAGAGCGCCCAATACGCAAACCGCCTCTCCCCG
CGCGTTGGCCGATTCATTAATG

Figure 19

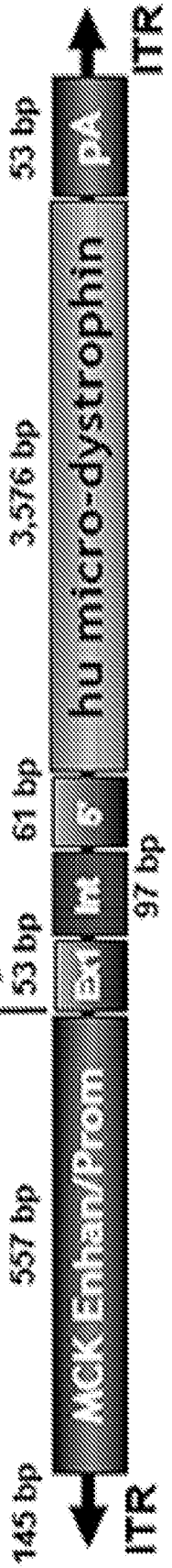

ITR
53 bp
PA
3,576 bp
hu micro-dystrophin
61 bp
5'
97 bp
Int
53 bp
Ex1
557 bp
MCK Enhan/Prom
145 bp
ITR

Figure 20A

SEQ ID NO: 9
Main features:
MCK promoter
Chimeric intron sequence
Human micro-dystrophin sequence
Poly A tail
Ampicillin resistance
pGEX plasmid backbone with pBR322 origin or replication

GCCCAATACGCAAACCGCCTCTCCCCGCGCGTTGGCCGATTCATTAATGCAGCTGGC
GCGCTCGCTCGCTCACTGAGGCCGCCCGGGCAAAGCCCGGGCGTCGGGCGACCTTT
GGTCGCCCGGCCTCAGTGAGCGAGCGAGCGCGCAGAGAGGGAGTGGCCAACTCCAT
CACTAGGGGTTCCTTGTAGTTAATGATTAACCCGCCATGCTAATTATCTACGTAGCC
ATGTCTAGACAGCCACTATGGGTCTAGGCTGCCCATGTAAGGAGGCAAGGCCTGGG
GACACCCGAGATGCCTGGTTATAATTAACCCAGACATGTGGCTGCTCCCCCCCCCCA
ACACCTGCTGCCTGAGCCTCACCCCCACCCCGGTGCCTGGGTCTTAGGCTCTGTACA
CCATGGAGGAGAAGCTCGCTCTAAAAATAACCCTGTCCCTGGTGGGCTGTGGGGGA
CTGAGGGCAGGCTGTAACAGGCTTGGGGGCCAGGGCTTATACGTGCCTGGGACTCC
CAAAGTATTACTGTTCCATGTTCCCGGCGAAGGGCCAGCTGTCCCCCGCCAGCTAGA
CTCAGCACTTAGTTTAGGAACCAGTGAGCAAGTCAGCCCTTGGGGCAGCCCATACA
AGGCCATGGGGCTGGGCAAGCTGCACGCCTGGGTCCGGGGTGGGCACGGTGCCCGG
GCAACGAGCTGAAAGCTCATCTGCTCTCAGGGGCCCCTCCCTGGGGACAGCCCCTCC
TGGCTAGTCACACCCTGTAGGCTCCTCTATATAACCCAGGGGCACAGGGGCTGCCCC
CGGGTCACCACCACCTCCACAGCACAGACAGACACTCAGGAGCCAGCCAGCCAGGT
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AGAACTGCTCCTCAGTGGATGTTGCCTTTACTTCTAGGCCTGTACGGAAGTGTTACTT
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AGGTGGAGGATTGTTATGAAAGGGAGGACGTGCAGAAGAAGACTTTTACCAAGTGG
GTGAACGCTCAGTTCAGCAAATTTGGGAAGCAGCACATCGAGAATCTGTTTTCCGAC
CTGCAGGATGGGAGACGGCTGCTGGATCTGCTGGAAGGACTGACTGGCCAGAAGCT
GCCCAAAGAGAAGGGGAGCACTAGGGTGCACGCCCTGAACAACGTGAACAAAGCT
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CGTGGACGGGAACCACAAACTGACACTGGGCCTGATCTGGAACATTATTCTGCACTG
GCAGGTGAAAAATGTGATGAAGAACATCATGGCCGGGCTGCAGCAGACCAATTCCG
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AGCCACAGGCCTGATCTGTTCGACTGGAATAGCGTGGTGTGCCAGCAGTCTGCCACA
CAGCGCCTGGAACATGCCTTCAATATCGCTCGGTACCAGCTGGGGATCGAAAAACT
GCTGGACCCAGAGGATGTGGACACTACATACCCAGATAAAAAGTCTATTCTGATGT
ACATTACTAGCCTGTTCCAGGTGCTGCCACAGCAGGTGTCTATTGAAGCCATTCAGG
AGGTGGAAATGCTGCCCCCGCCCCCCCAAAGTGACTAAAGAGGAGCATTTTCAGCTG
CATCATCAGATGCATTACAGCCAGCAGATTACCGTGAGCCTGGCTCAGGGATATGA
GCGCACCAGTAGTCCAAAACCACGGTTCAAGTCCTACGCTTATAC

Figure 20B

CCAGGCTGCCTACGTGACAACTAGCGACCCTACTAGATCCCCCTTTCCATCCCAGCA
CCTGGAGGCCCCAGAGGACAAGAGCTTTGGGTCCAGCCTGATGG
AAAGCGAGGTGAATCTGGATCGGTACCAGACAGCCCTGGAGGAGGTGCTGAGCTGG
CTGCTGAGTGCTGAAGACACACTGCAGGCCCAGGGCGAAATTTCCAATGACGTGGA
AGTGGTGAAGGATCAGTTCCACACACACGAGGGCTATATGATGGACCTGACAGCTC
ACCAGGGGCGCGTGGGCAATATCCTGCAGCTGGGCTCTAAACTGATCGGCACCGGG
AAACTGAGTGAGGACGAGGAAACAGAAGTGCAGGAGCAGATGAACCTGCTGAACA
GCCGCTGGGAGTGTCTGAGAGTGGCTAGTATGGAGAAGCAGTCCAACCTGCACCGG
GTGCTGATGGACCTGCAGAACCAGAAACTGAAAGAGCTGAACGACTGGCTGACAAA
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GATCTGAAGAGACAGGTGCAGCAGCATAAGGTGCTGCAGGAGGATCTGGAACAGG
AGCAGGTGCGGGTGAACTCCCTGACACATATGGTGGTGGTGGTGGACGAATCTAGT
GGAGATCACGCCACCGCCGCCCTGGAGGAACAGCTGAAGGTGCTGGGGGACCGGTG
GGCCAACATTTGCCGGTGGACCGAGGACAGGTGGGTGCTGCTGCAGGACATCCTGC
TGAAATGGCAGAGGCTGACCGAGGAGCAGTGTCTGTTTAGTGCTTGGCTGAGCGAG
AAAGAGGACGCCGTGAACAAGATCCACACAACCGGCTTTAAGGATCAGAACGAAAT
GCTGTCTAGCCTGCAGAAACTGGCTGTGCTGAAGGCCGATCTGGAGAAAAAGAAGC
AGAGCATGGGCAAACTGTATAGCCTGAAACAGGACCTGCTGAGCACCCTGAAGAAC
AAGAGCGTGACCCAGAAGACAGAAGCCTGGCTGGATAACTTTGCCCGCTGCTGGGA
CAACCTGGTGCAGAAACTGGAGAAAAGTACAGCTCAGATCTCTCAGGCTGTGACCA
CAACCCAGCCTAGCCTGACCCAGACAACCGTGATGGAAACCGTGACCACCGTGACA
ACCCGCGAACAGATCCTGGTGAAACATGCCCAGGAAGAGCTGCCACCTCCACCTCC
CCAGAAGAAGAGAACCCTGGAGCGGCTGCAGGAGCTGCAGGAAGCCACTGACGAA
CTGGACCTGAAGCTGAGGCAGGCCGAAGTGATTAAGGGGTCTTGGCAGCCTGTGGG
CGATCTGCTGATTGATTCCCTGCAGGACCACCTGGAAAAGGTGAAGGCTCTGAGAG
GCGAAATTGCTCCACTGAAGGAGAACGTGAGTCATGTGAACGATCTGGCTAGACAG
CTGACAACACTGGGCATCCAGCTGAGCCCATACAATCTGAGCACACTGGAGGACCT
GAATACCAGGTGGAAGCTGCTGCAGGTGGCTGTGGAAGACCGGGTGCGGCAGCTGC
ATGAGGCCCATCGCGACTTCGGACCAGCCAGCCAGCACTTTCTGAGCACATCCGTGC
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GCCGATCTGAACAACGTGAGGTTTAGCGCTTACAGAACCGCTATGAAGCTGAGACG
GCTGCAGAAGGCCCTGTGCCTGGATCTGCTGTCCCTGTCCGCCGCCTGCGATGCCCT
GGATCAGCATAATCTGAAGCAGAACGATCAGCCAATGGATATCCTGCAGATCATCA
ACTGCCTGACCACTATCTACGACAGGCTGGAGCAGGAGCACAACAACCTGGTGAAC
GTGCCTCTGTGCGTGGATATGTGCCTGAACTGGCTGCTGAACGTGTATGACACTGGG
CGCACCGGCCGGATCAGAGTGCTGAGTTTTAAAACTGGGATTATCTCCCTGTGTAAG
GCCCACCTGGAGGACAAGTACAGGTACCTGTTCAAGCAGGTGGCTAGTAGCACTGG
ATTTTGTGACCAGCGCCGCCTGGGACTGCTGCTGCATGATAGTATCCAGATTCCTAG
ACAGCTGGGAGAGGTGGCTAGTTTCGGAGGATCTAACATCGAACCCAGCGTGCGCA
GCTGTTTCCAGTTTGCCAATAACAAACCTGAAATCGAGGCTGCTCTGTTCCTGGATT
GGATGCGCCTGGAACCACAGAGCATGGTGTGGCTGCCTGTGCTGCACAGAGTGG

Figure 20C

CTGCCGCCGAAACTGCCAAGCACCAGGCTAAATGCAACATCTGCAAGGAATGTCCC
ATTATCGGCTTTCGCTACAGGAGTCTGAAACATTTTAACTACGAT
ATTTGCCAGAGCTGCTTCTTTTCCGGAAGAGTGGCCAAAGGACACAAGATGCACTAC
CCTATGGTGGAATATTGCACCCCAACTACATCTGGCGAAGATGTGCGCGATTTTGCC
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AGCGAGCGAGCGCGCCAGCTGGCGTAATAGCGAAGAGGCCCGCACCGATCGCCCTT
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TTACTAATCAAAGAAGTATTGCGACAACGGTTAATTTGCGTGATGGACAGACTCTTT
TACTCGGTGGCCTCACTGATTATAAAAACACTTCTCAGGATTCTGGCGTACCGTTCCT
GTCTAAAATCCCTTTAATCGGCCTCCTGTTTAGCTCCCGCTCTGATTCTAACGAGGAA
AGCACGTTATACGTGCTCGTCAAAGCAACCATAGTACGCGCCCTGTAGCGGCGCATT
AAGCGCGGCGGGTGTGGTGGTTACGCGCAGCGTGACCGCTACACTTGCCAGCGCCC
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CTCGACCCCAAAAAACTTGATTAGGGTGATGGTTCACGTAGTGGGCCATCGCCCTGA
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GAATTTTAACAAAATATTAACGTTTACAATTTAAATATTTGCTTATACAATCTTCCTG
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ACGGTTGAATATCATATTGATGGTGATTTGACTGTCTCCGGCCTTTCTCACCCGTTTG
AATCTTTACCTACACATTACTCAGGCATTGCATTTAAAATATATGAGGGTTCTAAAA
ATTTTTATCCTTGCGTTGAAATAAAGGCTTCTCCCGCAAAAGTATTACAGGGTCATA
ATGTTTTTGGTACAACCGATTTAGCTTTATGCTCTGAGGCTTTATTGCTTAATTTTGCT
AATTCTTTGCCTTGCCTGTATGATTTATTGGATGTTGGAAGTTCCTGATGCGGTATTT
TCTCCTTACGCATCTGTGCGGTATTTCACACCGCATATGGTGCACTCTCAGTACAATC
TGCTCTGATGCCGCATAGTTAAGCCAGCCCCGACACCCGCCAACACCCGCTGACGCG
CCCTGACGGGCTTGTCTGCTCCCGGCATCCGCTTACAGACAAGCTGTGACCGTCTCC
GGGAGCTGCATGTGTCAGAGGTTTTCACCGTCATCACCGAAACGCGCGAGACGAAA
GGGCCTCGTGATACGCCTATTTTTATAGGTTAATGTCATGATAATAATGGTTTCTTAG
ACGTCAGGTGGCACTTTTCGGGGAAATGTGCGCGGAACCCCTATTTGTTTATTTTTCT
AAATACATTCAAATATGTATCCGCTCATGAGACAATAACCCTGATAAATGCTTCAAT
AATATTGAAAAAGGAAGAGTATGAGTATTCAACATTTCCGTGTCGCCCTT

Figure 20D

ATTCCCTTTTTTGCGGCATTTTGCCTTCCTGTTTTTGCTCACCCAGAAACGCTGGTGA
AAGTAAAAGATGCTGAAGATCAGTTGGGTGCACGAGTGGGTTAC
ATCGAACTGGATCTCAACAGCGGTAAGATCCTTGAGAGTTTTCGCCCCGAAGAACGT
TTTCCAATGATGAGCACTTTTAAAGTTCTGCTATGTGGCGCGGTATTATCCCGTATTG
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AGTACTCACCAGTCACAGAAAAGCATCTTACGGATGGCATGACAGTAAGAGAATTA
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AAATAGACAGATCGCTGAGATAGGTGCCTCACTGATTAAGCATTGGTAACTGTCAG
ACCAAGTTTACTCATATATACTTTAGATTGATTTAAAACTTCATTTTTAATTTAAAAG
GATCTAGGTGAAGATCCTTTTTGATAATCTCATGACCAAAATCCCTTAACGTGAGTT
TTCGTTCCACTGAGCGTCAGACCCCGTAGAAAAGATCAAAGGATCTTCTTGAGATCC
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GGTTTGTTTGCCGGATCAAGAGCTACCAACTCTTTTTCCGAAGGTAACTGGCTTCAG
CAGAGCGCAGATACCAAATACTGTCCTTCTAGTGTAGCCGTAGTTAGGCCACCACTT
CAAGAACTCTGTAGCACCGCGTACATACCTCGCTCTGCTAATCCTGTTACCAGTGGC
TGCTGCCAGTGGCGATAAGTCGTGTCTTACCGGGTTGGACTCAAGACGATAGTTACC
GGATAAGGCGCAGCGGTCGGGCTGAACGGGGGGTTCGTGCACACAGCCCAGCTTGG
AGCGAACGACCTACACCGAACTGAGATACCTACAGCGTGAGCTATGAGAAAGCGCC
ACGCTTCCCGAAGGGAGAAAGGCGGACAGGTATCCGGTAAGCGGCAGGGTCGGAA
CAGGAGAGCGCACGAGGGAGCTTCCAGGGGGAAACGCCTGGTATCTTTATAGTCCT
GTCGGGTTTCGCCACCTCTGACTTGAGCGTCGATTTTTGTGATGCTCGTCAGGGGGG
CGGAGCCTATGGAAAAACGCCAGCAACGCGGCCTTTTTACGGTTCCTGGCCTTTTGC
TGGCCTTTTGCTCACATGTTCTTTCCTGCGTTATCCCCTGATTCTGTGGATAACCGTA
TTACCGGGTTTGAGTGAGCTGATACCGCTCGCCGCAGCCGAACGACCGAGCGCAGC
GAGTCAGTGAGCGACCAAGCGGAAGAGC

Figure 21A

SEQ ID NO: 7 : human micro-dystrophin gene

ATGCTGTGGTGGGAGGAGGTGGAGGATTGTTATGAAAGGGAGGACGTGCAGAAGA
AGACTTTTACCAAGTGGGTGAACGCTCAGTTCAGCAAATTTGGGAAGCAGCACATC
GAGAATCTGTTTTCCGACCTGCAGGATGGGAGACGGCTGCTGGATCTGCTGGAAGG
ACTGACTGGCCAGAAGCTGCCCAAAGAGAAGGGGAGCACTAGGGTGCACGCCCTGA
ACAACGTGAACAAAGCTCTGAGAGTGCTGCAGAACAACAACGTGGATCTGGTGAAT
ATTGGCAGTACTGATATCGTGGACGGGAACCACAAACTGACACTGGGCCTGATCTG
GAACATTATTCTGCACTGGCAGGTGAAAAATGTGATGAAGAACATCATGGCCGGGC
TGCAGCAGACCAATTCCGAGAAGATCCTGCTGTCTTGGGTGCGGCAGAGCACCCGC
AACTATCCCCAGGTGAACGTGATTAACTTCACTACATCCTGGAGCGACGGGCTGGCC
CTGAATGCTCTGATTCACAGCCACAGGCCTGATCTGTTCGACTGGAATAGCGTGGTG
TGCCAGCAGTCTGCCACACAGCGCCTGGAACATGCCTTCAATATCGCTCGGTACCAG
CTGGGGATCGAAAAACTGCTGGACCCAGAGGATGTGGACACTACATACCCAGATAA
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AGGAGCATTTTCAGCTGCATCATCAGATGCATTACAGCCAGCAGATTACCGTGAGCC
TGGCTCAGGGATATGAGCGCACCAGTAGTCCAAAACCACGGTTCAAGTCCTACGCTT
ATACCCAGGCTGCCTACGTGACAACTAGCGACCCTACTAGATCCCCCTTTCCATCCC
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GTGAATCTGGATCGGTACCAGACAGCCCTGGAGGAGGTGCTGAGCTGGCTGCTGAG
TGCTGAAGACACACTGCAGGCCCAGGGCGAAATTTCCAATGACGTGGAAGTGGTGA
AGGATCAGTTCCACACACACGAGGGCTATATGATGGACCTGACAGCTCACCAGGGG
CGCGTGGGCAATATCCTGCAGCTGGGCTCTAAACTGATCGGCACCGGGAAACTGAG
TGAGGACGAGGAAACAGAAGTGCAGGAGCAGATGAACCTGCTGAACAGCCGCTGG
GAGTGTCTGAGAGTGGCTAGTATGGAGAAGCAGTCCAACCTGCACCGGGTGCTGAT
GGACCTGCAGAACCAGAAACTGAAAGAGCTGAACGACTGGCTGACAAAGACTGAG
GAACGCACAAGGAAGATGGAGGAGGAGCCACTGGGACCCGACCTGGAGGATCTGA
AGAGACAGGTGCAGCAGCATAAGGTGCTGCAGGAGGATCTGGAACAGGAGCAGGT
GCGGGTGAACTCCCTGACACATATGGTGGT

Figure 21B

GGTGGTGGACGAATCTAGTGGAGATCACGCCACCGCCGCCCTGGAGGAACAGCTGA
AGGTGCTGGGGGACCGGTGGGCCAACATTTGCCGGTGGACCGAGGACAGGTGGGTG
CTGCTGCAGGACATCCTGCTGAAATGGCAGAGGCTGACCGAGGAGCAGTGTCTGTTT
AGTGCTTGGCTGAGCGAGAAAGAGGACGCCGTGAACAAGATCCACACAACCGGCTT
TAAGGATCAGAACGAAATGCTGTCTAGCCTGCAGAAACTGGCTGTGCTGAAGGCCG
ATCTGGAGAAAAAGAAGCAGAGCATGGGCAAACTGTATAGCCTGAAACAGGACCTG
CTGAGCACCCTGAAGAACAAGAGCGTGACCCAGAAGACAGAAGCCTGGCTGGATA
ACTTTGCCCGCTGCTGGGACAACCTGGTGCAGAAACTGGAGAAAAGTACAGCTCAG
ATCTCTCAGGCTGTGACCACAACCCAGCCTAGCCTGACCCAGACAACCGTGATGGA
AACCGTGACCACCGTGACAACCCGCGAACAGATCCTGGTGAAACATGCCCAGGAAG
AGCTGCCACCTCCACCTCCCCAGAAGAAGAGAACCCTGGAGCGGCTGCAGGAGCTG
CAGGAAGCCACTGACGAACTGGACCTGAAGCTGAGGCAGGCCGAAGTGATTAAGGG
GTCTTGGCAGCCTGTGGGCGATCTGCTGATTGATTCCCTGCAGGACCACCTGGAAAA
GGTGAAGGCTCTGAGAGGCGAAATTGCTCCACTGAAGGAGAACGTGAGTCATGTGA
ACGATCTGGCTAGACAGCTGACAACACTGGGCATCCAGCTGAGCCCATACAATCTG
AGCACACTGGAGGACCTGAATACCAGGTGGAAGCTGCTGCAGGTGGCTGTGGAAGA
CCGGGTGCGGCAGCTGCATGAGGCCCATCGCGACTTCGGACCAGCCAGCCAGCACT
TTCTGAGCACATCCGTGCAGGGGCCCTGGGAGAGGGCCATTTCTCCCAACAAGGTG
CCCTACTATATTAATCACGAGACCCAGACCACTTGTTGGGACCATCCCAAGATGACA
GAACTGTACCAGTCCCTGGCCGATCTGAACAACGTGAGGTTTAGCGCTTACAGAACC
GCTATGAAGCTGAGACGGCTGCAGAAGGCCCTGTGCCTGGATCTGCTGTCCCTGTCC
GCCGCCTGCGATGCCCTGGATCAGCATAATCTGAAGCAGAACGATCAGCCAATGGA
TATCCTGCAGATCATCAACTGCCTGACCACTATCTACGACAGGCTGGAGCAGGAGC
ACAACAACCTGGTGAACGTGCCTCTGTGCGTGGATATGTGCCTGAACTGGCTGCTGA
ACGTGTATGACACTGGGCGCACCGGCCGGATCAGAGTGCTGAGTTTTAAAACTGGG
ATTATCTCCCTGTGTAAGGCCCACCTGGAGGACAAGTACAGGTACCTGTTCAAGCAG
GTGGCTAGTAGCACTGGATTTTGTGACCAGCGCCGCCTGGGACTGCTGCTGCATGAT
AGTATCCAGATTCCTAGACAGCTGGGAGAGG

Figure 21C

TGGCTAGTTTCGGAGGATCTAACATCGAACCCAGCGTGCGCAGCTGTTTCCAGTTTG
CCAATAACAAACCTGAAATCGAGGCTGCTCTGTTCCTGGATTGGATGCGCCTGGAAC
CACAGAGCATGGTGTGGCTGCCTGTGCTGCACAGAGTGGCTGCCGCCGAAACTGCC
AAGCACCAGGCTAAATGCAACATCTGCAAGGAATGTCCCATTATCGGCTTTCGCTAC
AGGAGTCTGAAACATTTTAACTACGATATTTGCCAGAGCTGCTTCTTTTCCGGAAGA
GTGGCCAAAGGACACAAGATGCACTACCCTATGGTGGAATATTGCACCCCAACTAC
ATCTGGCGAAGATGTGCGCGATTTTGCCAAGGTGCTGAAGAATAAGTTTCGGACTAA
GAGGTACTTCGCCAAGCACCCCCGCATGGGGTATCTGCCAGTGCAGACAGTGCTGG
AAGGAGACAATATGGAGACCGATACAATGTGAGC

Figure 22A

pAAV.MCK.miR29C Sequence (SEQ ID NO: 12)

Main features:
MCK enhancer- 190-395 (SEQ ID NO: 10)
MCK promoter- 396-753 (SEQ ID NO: 11)
EF1a Intron- 1155-1315, 1609-2083
miR-29c-1487-1512
shRNA-miR29-c with primary seed sequence- 1316-1608
SV40 PolyA- 2094-2146

CTGNNNNNNGCGCGCTCGCTCGCTCACTGAGGCCGCCCGGGCAAAGCCCGGGCGTC
GGGCGACCTTTGGTCGCCCGGCCTCAGTGAGCGAGCGAGCGCGCAGAGAGGGAGTG
GCCAACTCCATCACTAGGGGTTCCTTGTAGTTAATGATTAACCCGCCATGCTAATTA
TCTACGTAGCCATGTCTAGACAGCCACTATGGGTCTAGGCTGCCCATGTAAGGAGGC
AAGGCCTGGGGACACCCGAGATGCCTGGTTATAATTAACCCAGACATGTGGCTGCTC
CCCCCCCCCAACACCTGCTGCCTGAGCCTCACCCCCACCCCGGTGCCTGGGTCTTAG
GCTCTGTACACCATGGAGGAGAAGCTCGCTCTAAAAATAACCCTGTCCCTGGTGGGC
TGTGGGGGACTGAGGGCAGGCTGTAACAGGCTTGGGGGCCAGGGCTTATACGTGCC
TGGGACTCCCAAAGTATTACTGTTCCATGTTCCCGGCGAAGGGCCAGCTGTCCCCCG
CCAGCTAGACTCAGCACTTAGTTTAGGAACCAGTGAGCAAGTCAGCCCTTGGGGCA
GCCCATACAAGGCCATGGGGCTGGGCAAGCTGCACGCCTGGGTCCGGGGTGGGCAC
GGTGCCCGGGCAACGAGCTGAAAGCTCATCTGCTCTCAGGGGCCCCTCCCTGGGGA
CAGCCCCTCCTGGCTAGTCACACCCTGTAGGCTCCTCTATATAACCCAGGGGCACAG
GGGCTGCCCCCGGGTCACCACCACCTCCACAGCACAGACAGACACTCAGGAGCCAG
CCAGCCAGGTAAGTTTAGTCTTTTTGTCTTTTATTTCAGGTCCCGGATCCGGTGGTGG
TGCAAATCAAAGAACTGCTCCTCAGTGGATGTTGCCTTTACTTCTAGGCCTGTACGG
AAGTGTTACTTCTGCTCTAAAAGCTGCGGAATTGTACCCGCCTAGAGGATCCGGTAC
TCGAGGAACTGAAAAACCAGAAAGTTAACTGGTAAGTTTAGTCTTTTTGTCTTTTAT
TTCAGGTCCCGGATCCGGTGGTGGTGCAAATCAAAGAACTGCTCCTCAGTGGATGTT
GCCTTTACTTCTAGGCCTGTACGGAAGTGTTACTTCTGCTCTAAAAGCTGCGGAATT
GTACCCGGGGCCGATCCACCGGTCTTTTTCGCAACGGGTTTGCCGCCAGAACACAGG
TAAGTGCCGTGTGTGGTTCCCGCGGGCGGCGACGGGGCCCGTGCGTCCCAGCGCAC
ATGTTCGGCGAGGCGGGGCCTGCGAGCGCGGCCACCGAGAATCGGACGGGGGTAGT
CTCAAGCTGGCCGGCCTGTTTGAATGAGGCTTCAGTACTTTACAGAATCGTTGCCTG
CACATCTTGGAAACACTTGCTGGGATTACTTCTTCAGGTTAACCCAACAGAAGGCTC
GAGAAGGTATATTGCTGTTGACAGTGAGCGCAACCGATTTCAAATGGTGCTAGAGT
GAAGCCACAGATGTCTAGCACCATTTGAAATCGGTTATGCCTACTGCCTCGGAATTC
AAGGGGCTACTTTAGGAGCAATTATCTTGTTTACTAAAACTGAATACCTTGCTATCT
CTTTGATACATTGGCCGGCCTGCTCTGGTGCCTGGCCTCGCGCCGCCGTGTATCGCC
CCGCCCTGGGCGGCAAGGCTGGCCCGGTCGGCACCAGTTGCGTGAGCGGAAAGATG
GCCGCTTCCCGGCCCTGCTGCAGGGAGCTCAAAATGGAGGACGCGGCGCTCGGGAG
AGCGGGCGGGTGAGTCACCCACACAAAGGAAAAGGGCCTTTCCGTCCTCAGCCGTC
GCTTCATGTGACTCCACGGAGTACCGGGCGCCGTCCAGGCACCTCGATTAGTT

Figure 22B

CTCGAGCTTTTGGAGTACGTCGTCTTTAGGTTGGGGGGAGGGGTTTTATGCGATGGA
GTTTCCCCACACTGAGTGGGTGGAGACTGAAGTTAGGCCAGCTTGGCACTTGATGTA
ATTCTCCTTGGAATTTGCCCTTTTTGAGTTTGGATCTTGGTTCATTCTCAAGCCTCAG
ACAGTGGTTCAAAGTTTTTTTCTTCCATTTCAGGTGTCGTGAAAAGCTAGTGCGGCC
GCAATAAAAGATCTTTATTTTCATTAGATCTGTGTGTTGGTTTTTTGTGTGTCTAGAC
ATGGCTACGTAGATAATTAGCATGGCGGGTTAATCATTAACTACAAGGAACCCCTAG
TGATGGAGTTGGCCACTCCCTCTCTGCGCGCTCGCTCGCTCACTGAGGCCGGGCGAC
CAAAGGTCGCCCGACGCCCGGGCTTTGCCCGGGCGGCCTCAGTGAGCGAGCGAGCG
CGCNNNNNNCAGCTGGCGTAATAGCGAAGAGGCCCGCACCGATCGCCCTTCCCAAC
AGTTGCGCAGCCTGAATGGCGAATGGAAGTTCCAGACGATTGAGCGTCAAAATGTA
GGTATTTCCATGAGCGTTTTTCCTGTTGCAATGGCTGGCGGTAATATTGTTCTGGATA
TTACCAGCAAGGCCGATAGTTTGAGTTCTTCTACTCAGGCAAGTGATGTTATTACTA
ATCAAAGAAGTATTGCGACAACGGTTAATTTGCGTGATGGACAGACTCTTTTACTCG
GTGGCCTCACTGATTATAAAAACACTTCTCAGGATTCTGGCGTACCGTTCCTGTCTA
AAATCCCTTTAATCGGCCTCCTGTTTAGCTCCCGCTCTGATTCTAACGAGGAAAGCA
CGTTATACGTGCTCGTCAAAGCAACCATAGTACGCGCCCTGTAGCGGCGCATTAAGC
GCGGCGGGTGTGGTGGTTACGCGCAGCGTGACCGCTACACTTGCCAGCGCCCTAGC
GCCCGCTCCTTTCGCTTTCTTCCCTTCCTTTCTCGCCACGTTCGCCGGCTTTCCCCGTC
AAGCTCTAAATCGGGGGCTCCCTTTAGGGTTCCGATTTAGTGATTTACGGCACCTCG
ACCCCAAAAAACTTGATTAGGGTGATGGTTCACGTAGTGGGCCATCGCCCTGATAGA
CGGTTTTTCGCCCTTTGACGTTGGAGTCCACGTTCTTTAATAGTGGACTCTTGTTCCA
AACTGGAACAACACTCAACCCTATCTCGGTCTATTCTTTTGATTTATAAGGGATTTTG
CCGATTTCGGCCTATTGGTTAAAAAATGAGCTGATTTAACAAAAATTTAACGCGAAT
TTTAACAAAATATTAACGTTTACAATTTAAATATTTGCTTATACAATCTTCCTGTTTT
TGGGGCTTTTCTGATTATCAACCGGGGTACATATGATTGACATGCTAGTTTTACGATT
ACCGTTCATCGATTCTCTTGTTTGCTCCAGACTCTCAGGCAATGACCTGATAGCCTTT
GTAGAGACCTCTCAAAAATAGCTACCCTCTCCGGCATGAATTTATCAGCTAGAACGG
TTGAATATCATATTGATGGTGATTTGACTGTCTCCGGCCTTTCTCACCCGTTTGAATC
TTTACCTACACATTACTCAGGCATTGCATTTAAAATATATGAGGGTTCTAAAAATTTT
TATCCTTGCGTTGAAATAAAGGCTTCTCCCGCAAAAGTATTACAGGGTCATAATGTT
TTTGGTACAACCGATTTAGCTTTATGCTCTGAGGCTTTATTGCTTAATTTTGCTAATT
CTTTGCCTTGCCTGTATGATTTATTGGATGTTGGAAGTTCCTGATGCGGTATTTTCTC
CTTACGCATCTGTGCGGTATTTCACACCGCATATGGTGCACTCTCAGTACAATCTGCT
CTGATGCCGCATAGTTAAGCCAGCCCCGACACCCGCCAACACCCGCTGACGCGCCCT
GACGGGCTTGTCTGCTCCCGGCATCCGCTTACAGACAAGCTGTGACCGTCTCCGGGA
GCTGCATGTGTCAGAGGTTTTCACCGTCATCACCGAAACGCGCGAGACGAAAGGGC
CTCGTGATACGCCTATTTTTATAGGTTAATGTCATGATAATAATGGTTTCTTAGACGT
CAGGTGGCACTTTTCGGGGAAATGTGCGCGGAACCCCTATTTGTTTATTTTTCTAAAT
ACATTCAAATATGTATCCGCTCATGAGACAATAACCCTGATAAATGCTTCAATAATA
TTGAAAAAGGAAGAGTATGAGTATTCAACATTTCCGTGTCGCCCTTATTCCCTTTTTT
GCGGCATTTTGCCTTCCTGTTTTTGCTCACCCAGAAACGCTGGTGAAAGTAAAAGAT
GCTGAAGATCAGTTGGGTGCACGAGTGGGTTACATCGAACTGGATCTCAACAGCGG
TAAGATCCTTGAGAGTTTTCGCCCCGAAGAACGTT

Figure 22C

TTCCAATGATGAGCACTTTTAAAGTTCTGCTATGTGGCGCGGTATTATCCCGTATTGA
CGCCGGGCAAGAGCAACTCGGTCGCCGCATACACTATTCTCAGAATGACTTGGTTGA
GTACTCACCAGTCACAGAAAAGCATCTTACGGATGGCATGACAGTAAGAGAATTAT
GCAGTGCTGCCATAACCATGAGTGATAACACTGCGGCCAACTTACTTCTGACAACGA
TCGGAGGACCGAAGGAGCTAACCGCTTTTTTGCACAACATGGGGGATCATGTAACTC
GCCTTGATCGTTGGGAACCGGAGCTGAATGAAGCCATACCAAACGACGAGCGTGAC
ACCACGATGCCTGTAGCAATGGCAACAACGTTGCGCAAACTATTAACTGGCGAACT
ACTTACTCTAGCTTCCCGGCAACAATTAATAGACTGGATGGAGGCGGATAAAGTTGC
AGGACCACTTCTGCGCTCGGCCCTTCCGGCTGGCTGGTTTATTGCTGATAAATCTGG
AGCCGGTGAGCGTGGGTCTCGCGGTATCATTGCAGCACTGGGGCCAGATGGTAAGC
CCTCCCGTATCGTAGTTATCTACACGACGGGGAGTCAGGCAACTATGGATGAACGA
AATAGACAGATCGCTGAGATAGGTGCCTCACTGATTAAGCATTGGTAACTGTCAGAC
CAAGTTTACTCATATATACTTTAGATTGATTTAAAACTTCATTTTTAATTTAAAAGGA
TCTAGGTGAAGATCCTTTTTGATAATCTCATGACCAAAATCCCTTAACGTGAGTTTTC
GTTCCACTGAGCGTCAGACCCCGTAGAAAAGATCAAAGGATCTTCTTGAGATCCTTT
TTTTCTGCGCGTAATCTGCTGCTTGCAAACAAAAAAACCACCGCTACCAGCGGTGGT
TTGTTTGCCGGATCAAGAGCTACCAACTCTTTTTCCGAAGGTAACTGGCTTCAGCAG
AGCGCAGATACCAAATACTGTCCTTCTAGTGTAGCCGTAGTTAGGCCACCACTTCAA
GAACTCTGTAGCACCGCGTACATACCTCGCTCTGCTAATCCTGTTACCAGTGGCTGC
TGCCAGTGGCGATAAGTCGTGTCTTACCGGGTTGGACTCAAGACGATAGTTACCGGA
TAAGGCGCAGCGGTCGGGCTGAACGGGGGGTTCGTGCACACAGCCCAGCTTGGAGC
GAACGACCTACACCGAACTGAGATACCTACAGCGTGAGCTATGAGAAAGCGCCACG
CTTCCCGAAGGGAGAAAGGCGGACAGGTATCCGGTAAGCGGCAGGGTCGGAACAG
GAGAGCGCACGAGGGAGCTTCCAGGGGGAAACGCCTGGTATCTTTATAGTCCTGTC
GGGTTTCGCCACCTCTGACTTGAGCGTCGATTTTTGTGATGCTCGTCAGGGGGGCGG
AGCCTATGGAAAAACGCCAGCAACGCGGCCTTTTTACGGTTCCTGGCCTTTTGCTGG
CCTTTTGCTCACATGTTCTTTCCTGCGTTATCCCCTGATTCTGTGGATAACCGTATTAC
CGGGTTTGAGTGAGCTGATACCGCTCGCCGCAGCCGAACGACCGAGCGCAGCGAGT
CAGTGAGCGACCAAGCGGAAGAGC