

Supplementary Materials for

Follistatin Gene Delivery Enhances Muscle Growth and Strength in Nonhuman Primates

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Table S1. Menstrual cycles in untreated control and AAV1-FS344-treated cynomolgus macaques.

Table S2. Sperm motility and morphology of untreated control and AAV1-FS344-treated cynomolgus macaques.

Table S3. Primer and probe sets used in quantitative polymerase chain reaction (QPCR) for vector genome quantification.

Supplementary Material

Fig. S1

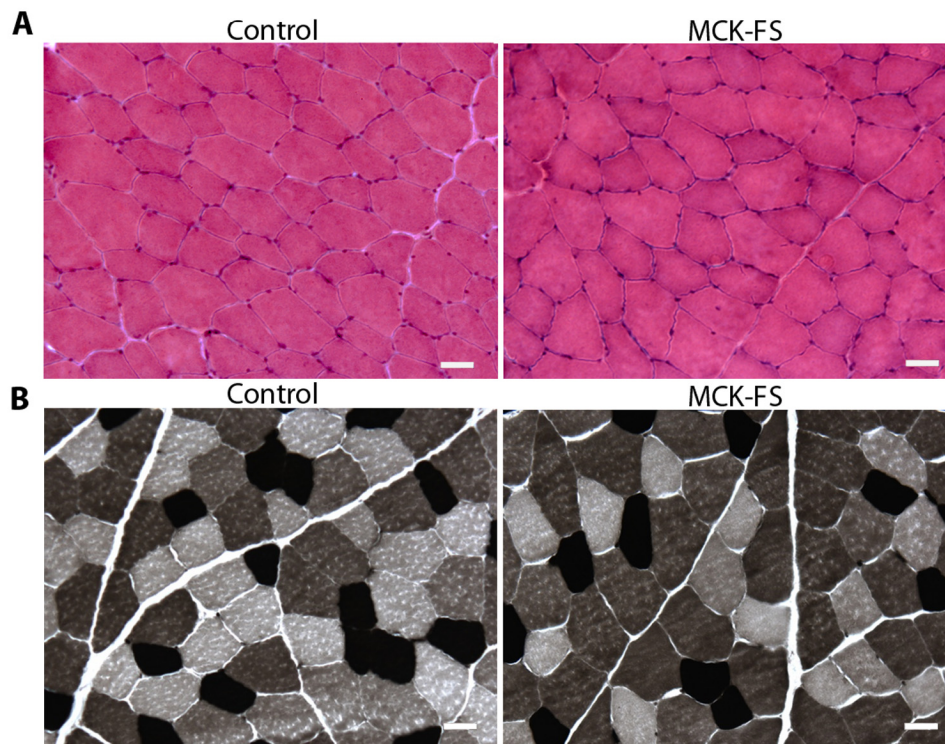


Fig. S1 MCK-FS causes myofiber hypertrophy and predominantly affects fast-twitch type 2 myofibers in the quadriceps muscle.

(A) H&E staining of the quadriceps muscle reveals myofiber hypertrophy in MCK-FS macaque (right) compared to untreated control (left). **(B)** Fiber types determined by ATPase staining (pH 4.6) in the MCK-FS macaque (right) compared to untreated control (left). Scale bars, 20 μ m.

Table S1

| Months Post Injection | Control | MCK-FS | CMV-FS |
|--|-------------------|-------------------|-------------------|
| 10 months | + (27) | + (26) | + (26) |
| 11 months | + (24) | + (31) | + (28) |
| 12 months | + (28) | + (24) | ND |
| 13 months | ND | + (29) | + |
| 14 months | + | + (31) | + (30) |
| 15 months | + (29) | + | + (26) |
| Mean ± SD menstrual cycle duration (days) | 27.0 ± 2.2 | 28.2 ± 3.1 | 27.5 ± 1.9 |

Abbreviations: ND, Not detected; SD, Standard Deviation

“+” indicates menstrual cycle detected. A value in parenthesis indicates days between two consecutive menstrual cycles.

Table S1 Menstrual cycles in untreated control and AAV1-FS344 treated cynomolgus macaques.

Menstrual cycles were monitored in female macaques following gene transfer. Both CMV-FS and MCK-FS treated macaques showed normal menstrual cycle duration compared to untreated control macaque. Data from 6 months prior to necropsy are shown.

Table S2

| Group | Motility (%) | Normal Morphology (%) | Abnormalities (%) |
|-----------------------|---------------------|------------------------------|--------------------------|
| Control #1 | 60 | 91 | 9 |
| Control #2 | 90 | 77 | 23 |
| Mean (Control) | 75 | 84 | 16 |
| | | | |
| CMV-FS | 65 | 76 | 24 |

Table S2 Sperm motility and morphology of untreated control and AAV1-FS344 treated cynomolgus macaques.

Prior to necropsy, sperm was collected from untreated control and AAV1-FS344 treated macaques. There was no significant change in sperm motility and morphology in the CMV-FS macaque compared to untreated control macaques.

Fig. S2

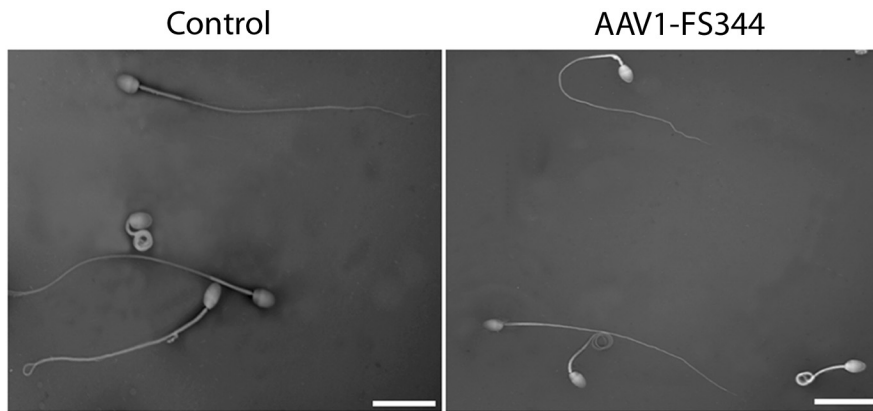


Fig. S2 Morphological effects on sperm from male cynomolgus macaques treated with AAV1-FS344.

Prior to necropsy, sperm was collected from untreated control and AAV1-FS344 treated macaques. The morphology of CMV-FS treated macaque sperm is similar to untreated controls.

Table S3

| Amplicon | Forward primer sequence | Reverse primer sequence | Taqman probe sequence |
|---------------------|--------------------------------|--------------------------------|--------------------------------|
| CMV amplicon | 5'TGGAAATCCCCGTG AGTCAA3' | 5'CATGGTGATGCGG TTTTGG3' | 5'CCGCTATCCACGC CCATTGATG3' |
| MCK amplicon | 5'CCCGAGATGCCTGG TTATAATT3' | 5'GCTCAGGCAGCAG GTGTTG3' | 5'CCAGACATGTGGC TGCTCCCCC3' |

Table S3 Primer and probe sets used in quantitative polymerase chain reaction (QPCR) for vector genome quantification.