

Supplementary Information for:

CRISPR/Cas9 mediated generation of an ovine model for infantile neuronal ceroid lipofuscinosis (CLN1 disease)

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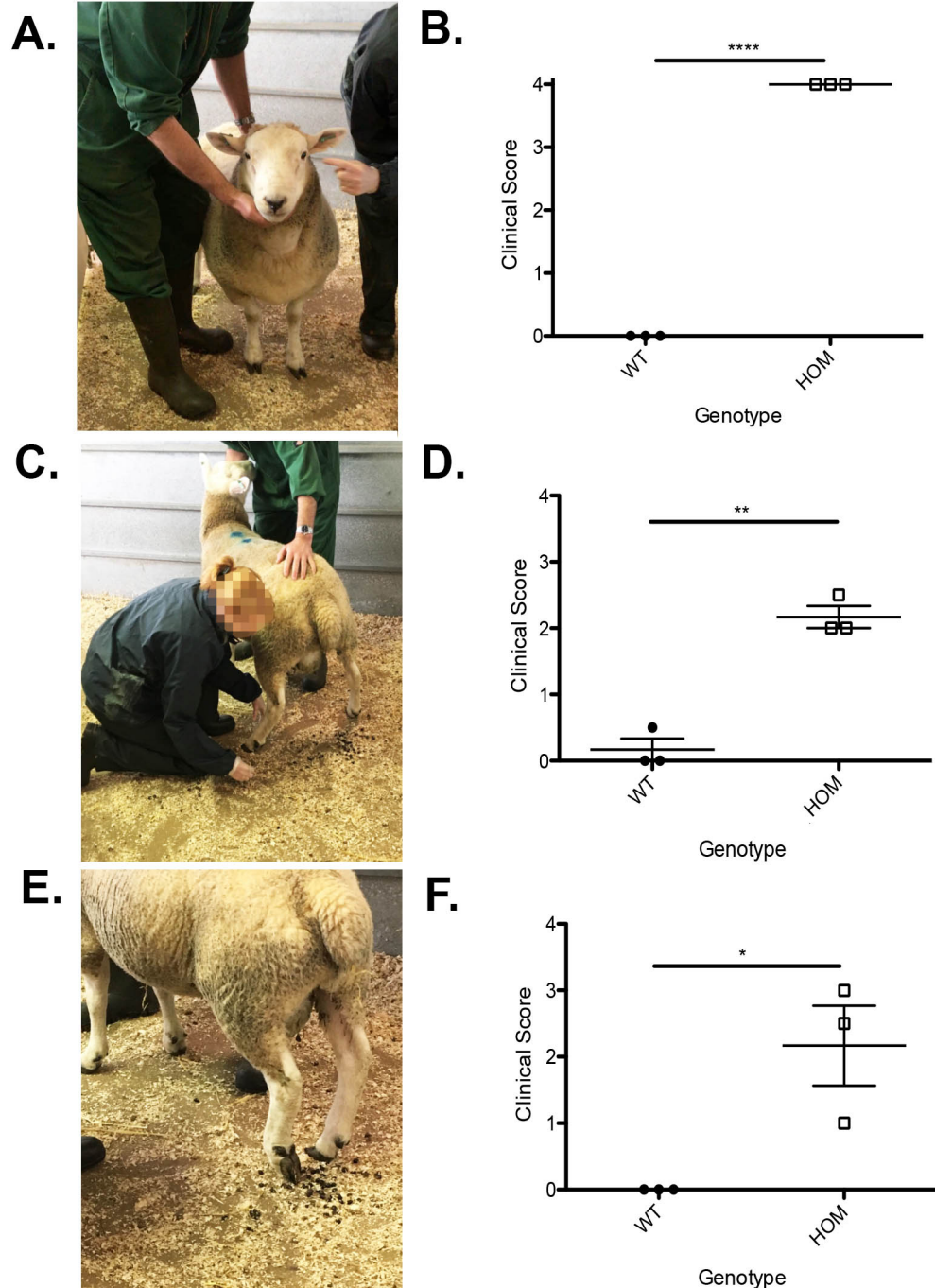
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ssODN1 atctgtcttctactgctgtaggtgttttggactccctTAAtgcccaggagaaagctcacacatctgtgacttcacag

ssODN2 atctgtcttctactgctgtaggtgttttggactccctTAAtgGccaggagaaagctcacacatctgtgacttcacag

***Supplementary Figure 1: Sequence of the HDR repair template provided as an ssODN***

The red letters indicate sequence changes introduced in to the WT sequence. The TAA in both ssODNs introduces a coding change, the R151\* mutation described in patients. The G in ssODN2 is a silent blocking mutation required to prevent the re-cutting of the repaired allele by sgRNA 2.



**Supplementary Figure 2: PPT1 sheep show exhibit clinical signs similar to patients with CLN1 disease at humanely defined endpoint**

**A.** Photograph demonstrating assessment of the menace response. **B.** Scatter plot demonstrates a significant loss in the menace response of the homozygote PPT1 sheep ( $P < 0.0001$ ). **C.** Picture demonstrates hoof placement test. **D.** Scatter plot demonstrates a significant increase in loss of hoof placement in homozygote sheep ( $P = 0.0011$ ). **E.** Photograph demonstrates knuckling test in rear limbs. **F.** Scatter plot demonstrates a significant loss of conscious proprioception in the homozygote sheep as indicated using the knuckling test on the hind limbs ( $P = 0.0226$ ). Statistical analyses utilized unpaired two-tailed Student's t-test. Error bars represent SEM.