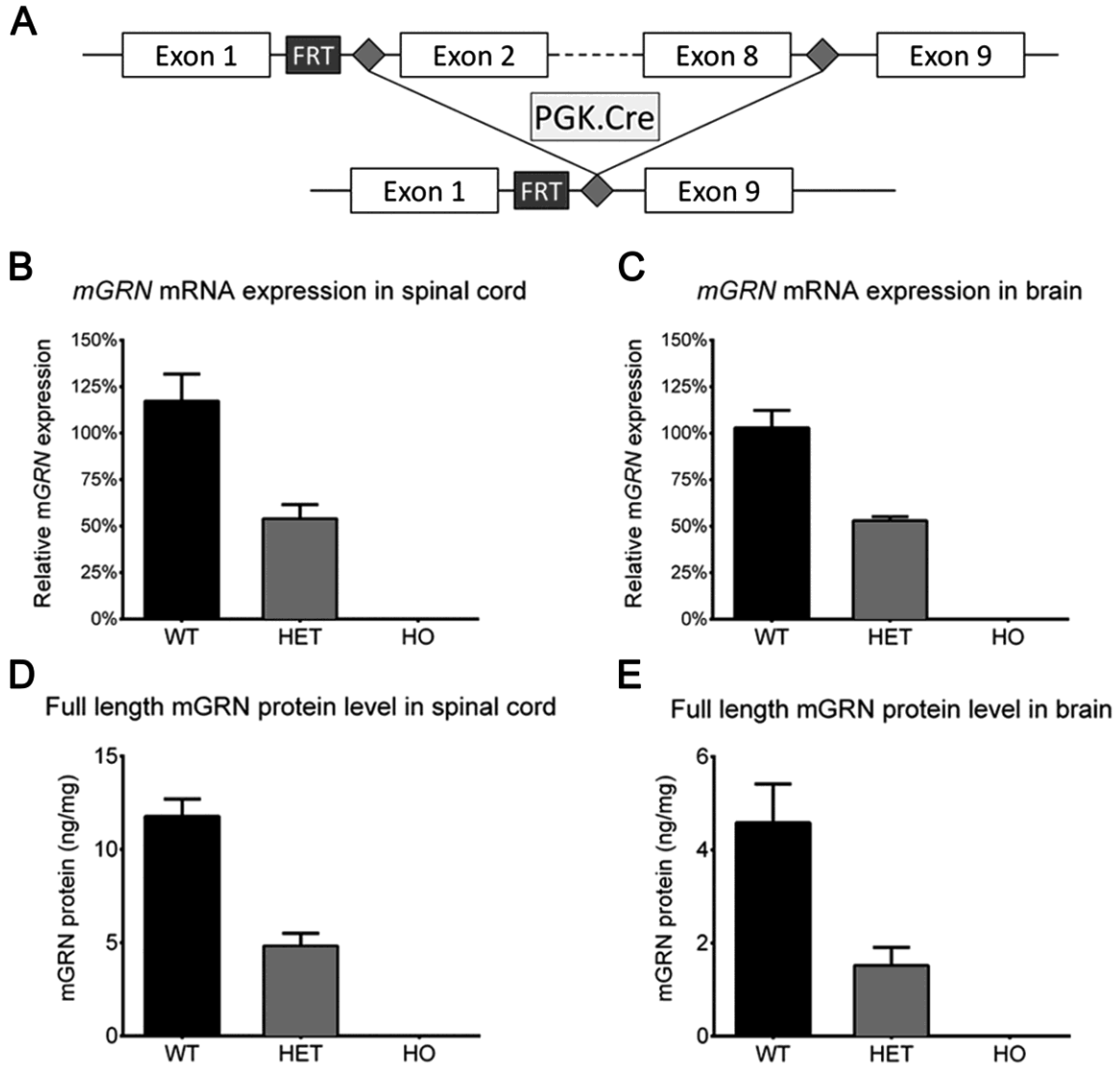

Figure S1: Characterization of the *mGRN* knockout mice. (A) Schematic representation of the genetic modifications that led to a constitutive *progranulin* knockout, before and after crossing with a PGK-1 Cre line. (B – E) mGRN mRNA and protein level were analyzed by qPCR and ELISA, in brains and spinal cords of constitutive mGRN$^{-/-}$ mice.

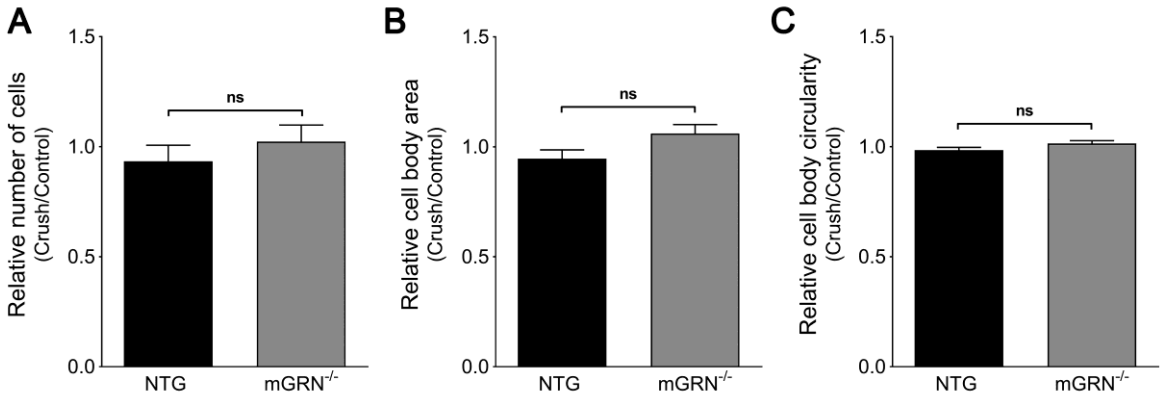

Figure S2: Analysis of cell bodies in the facial motor nucleus at 28 days post injury in 7 week old mice. The number (A), area (B) and circularity (C) of facial motor neuron cell bodies in the facial motor nucleus, normalized to the contralateral side.

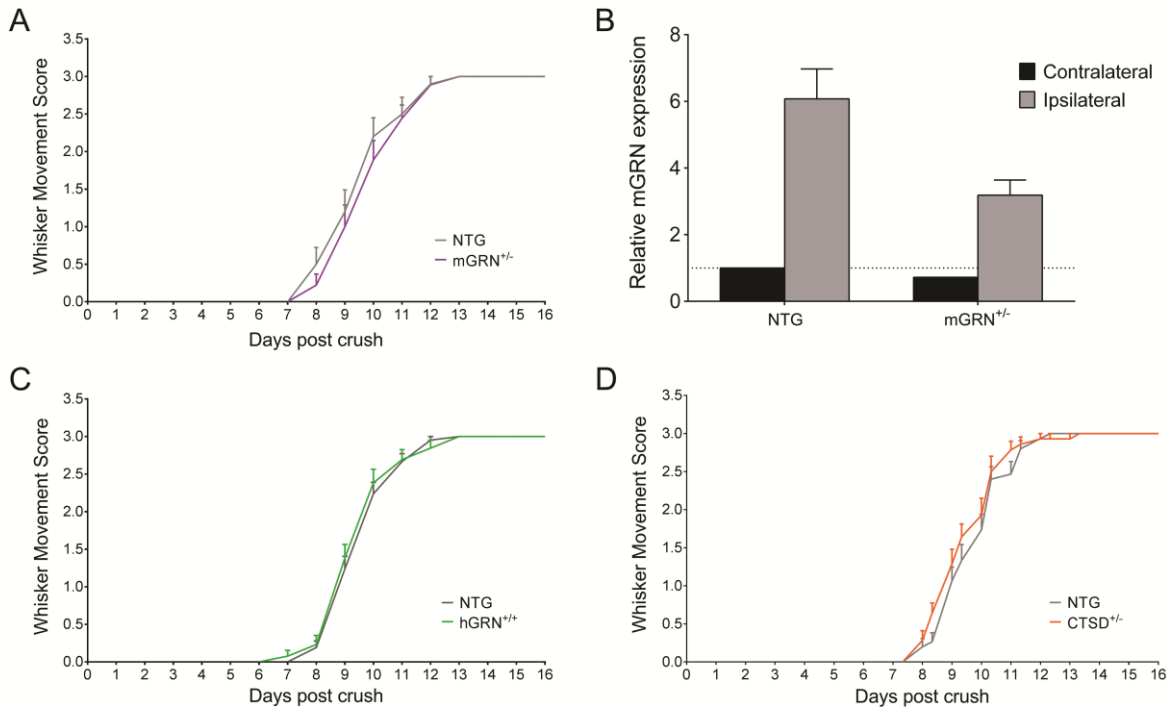

Figure S3: Whisker movement recovery in mGRN$^{+/-}$, hGRN$^{+/+}$ and CTSD$^{+/-}$ mice. (A) Whisker movement recovery was unchanged in heterozygous mGRN knockout mice. (B) Quantification of the transcriptional mGRN upregulation in the facial nerve, at 5 days post crush. (C) Genetic overexpression of human GRN has no effect on whisker movement recovery. (D) Heterozygous CTSD knockout mice show no delay in whisker movement recovery.

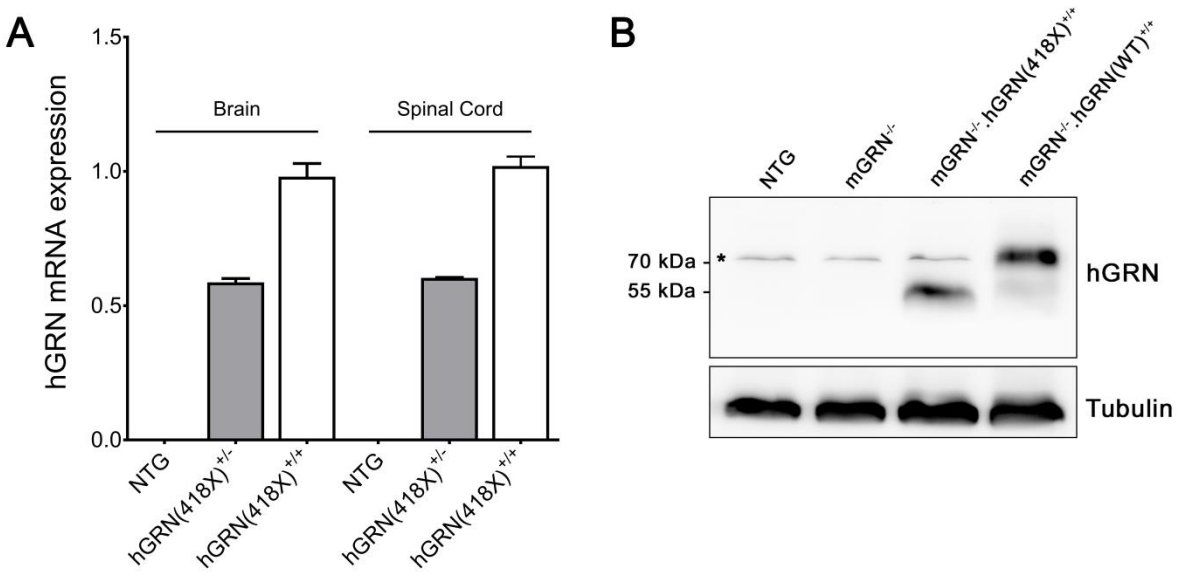

Figure S4: RNA and protein expression of hGRN(418X). (A) Relative levels of hGRN mRNA expression in the brain and spinal cord of hGRN(418X) overexpressing mice. (B) Western blot showing expression of the 418X truncated as well as the wild-type hGRN protein in a mGRN knockout background, *asterisk* indicates a non-specific band.