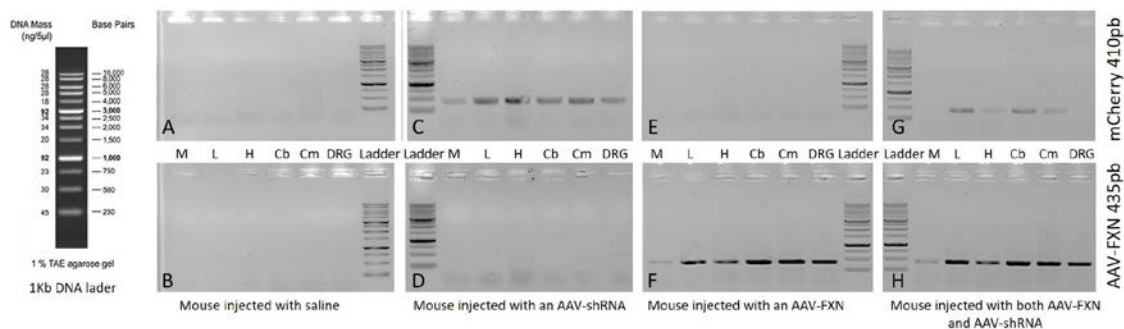
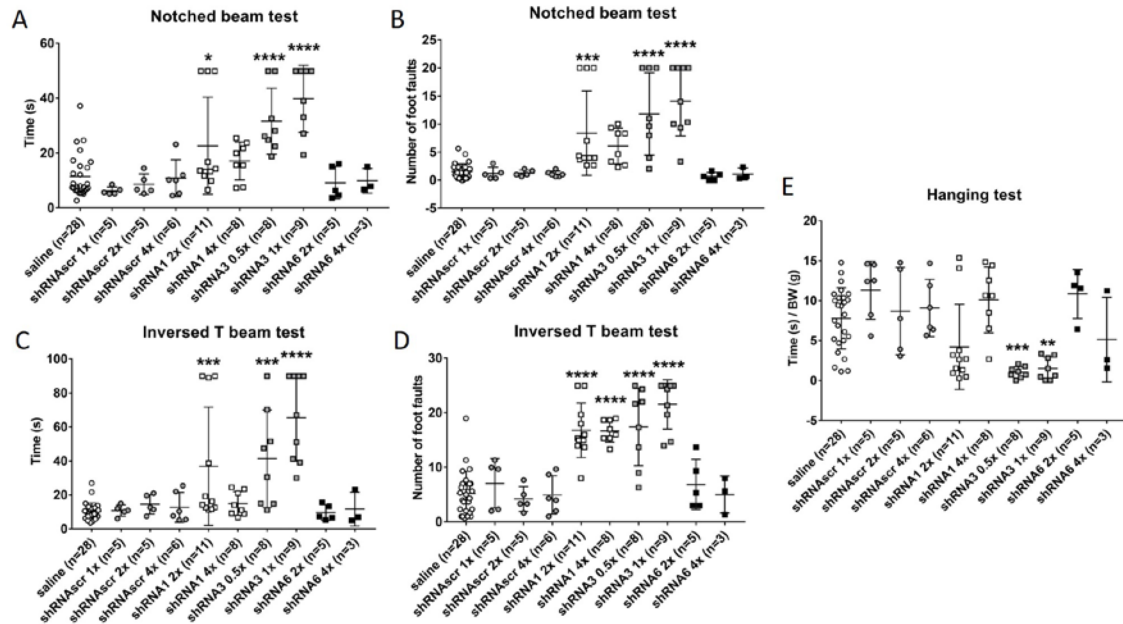


Supplementary Table 1: Sequences of primers.

PCR and qPCR primers				
	Target	Name	F	R
Constuction plasmid	Intron px330	Hyb-In	TGCCTGAGAGCGCAGTCGAGAAGggagtcgctgcga cgctgc	TCCCCAACGTCCACATGGTGCGGCTAGCCaa cctgaaaaaaagtatttcag
		U6-shRE	GATCACGAGACTAGCCTCGAGCGGCGCCCCCTTACCAGGGCCTATTTCCCATTGATTCCTCATATT TGCATATACGATACAGGCTGTTAGAGAGATAATTGGAATTAATTTGACTGTAAACACAAAGATATTAGT ACAAAATACGTGACGTAGAAAGTAATAATTTCTTGGGTAGTTTGCAGTTTTAAATATGTTTTAAATG GACTATCATATGCTTACCCTAACTGAAAGTATTTGATTCTTGGCTTTATATCTCTGTGGAAGGACG AAACACCGGACCGGTGCAGATTGCTAGCAATTCGACCTCGAGACAAATGGCAGTATTCATCCACG CTACTTATCTACGTAGGGTGCAGCGGCCT	
		shRNA1	CCGGGCTGGACTCTTAGCAGAGTTCTCGAGAAC TCTGCTAAAGAGTCCAGCTTTTTT	ctagaAAAAAGCTGGACTCTTTAGCAGAGTTC TCGAGAACTCTGCTAAAGAGTCCAGC
		shRNA3	ccggACGTGGCCTCAACCAGATTGCTCGAGCAAA TCTGGTTGAGGCCACGTTTTT	ctagAAAAACGTGGCCTCAACCAGATTGCT CGAGCAAATCTGGTTGAGGCCACGT
		shRNA4	ccggCCATACACGTTTGAGGACTATCTCGAGATAGT CCTCAAACGTGTATGTTTTT	ctagAAAAACCATACACGTTTGAGGACTATCT CGAGATAGTCTCAAACGTGTATGG
		shRNA6	ccgGTGGACCTAAGCGTTATGACTctcagAGTCATA ACGCTTAGGTCCACTttttt	CTAGaaaaaGTGGACCTAAGCGTTATGACTctc gagAGTCATAACGCTTAGGTCCA
		shRNA-scramble	ccggCCTAAGGTTAAGTCGCCCTCGctcagCGAGG GCGACTTAACCTTAGGTTTTT	ctagAAAAACCTAAGGTTAAGTCGCCCTCGCTC GAGCGAGGGCGACTTAACCTTAGG
PCR	mCherry		GGCCATCATCAAGGAGTTC	CCATGGTCTTCTTCGATTA
	AAV frataxine		GCTGTGCGCAGGACTTCTGG	GCTTGTTCGGGGTTTGTTTA
qPCR	mCherry		TGAGGTCAAGACCCTACA	GATGGTGTAGTCGTTGTG
qRT-PCR	Human frataxine		AAGCCATACAGCTTTGAGGACTA	TTGGCGTCTGCTTGTGATCA
	HPRT		CAGGACTGAAAGACTTGCTCGAGAT	CAGCAGGTCAGCAAAGAACTTATAGC



Supplementary Figure 1: For each mouse, two PCRs were made to confirm the treatment received by the presence of mCherry (shRNA) on the top and/or AAV-FXN on the bottom. Muscle (M), liver (L), heart (H), Cerebellum (Cb) and Cerebrum (Cm).



Supplementary Figure 2: The mice injected with an AAV containing different shRNAs were monitored with various behavior tests. The time taken by the YG8sR mice to cross the notched beam (A) and the inverted T beam (C) are illustrated 5 weeks after the injection. The number of foot faults made during the notched beam crossing (B) and the inverted T beam crossing (D) are also illustrated. In E, the hanging test is quantified as the ratio of hanging time/body weight. The results were analyzed by a two ways ANOVA test (Sidak's multiple comparisons test). **** p value < 0.0001 relative to the saline controls.