**Table S1** *COLQ* c.1190G>A genotypes in domestic cat breeds

**Table S2** WGS variants identified in 20x coverage of an affected Devon Rex.

**Table S3** PCR primers used for genotyping *COLQ* variant in cats.

**Figure S1 Haplotype comparison between cases and controls in the region of association.**

**Figure S2** *COLQ* CDS and protein sequence. Presented are the feline wild-type and mutated CDS and amino acid *COLQ* sequences.

**Figure S3** Decremental response to repetitive nerve stimulation at 3 Hz in an affected Sphynx cat.

**Video S1** Sphynx cats with *COLQ* variant for congenital myasthenic syndrome (CMS). Affected cats present with passive ventroflexion of the head and neck, head bobbing, scapulae protrusion, megaesophagus, generalized muscle weakness and fatigability (Malik *et al.* 1993). The video represents the three Sphynx male siblings that demonstrated α-dystroglycan deficiency - Case 1 (Martin *et al.* 2008). Each cat died of food-related asphyxiation or aspiration;

**SVideo 2** Devon Rex cat with *COLQ* variant for congenital myasthenic syndrome (CMS). Affected cats present with passive ventroflexion of the head and neck, head bobbing, scapulae protrusion, megaesophagus, generalized muscle weakness and fatigability (Malik *et al.* 1993). The video represents the Devon Rex with milder disease and crystalline inclusion bodies in muscle biopsy specimens – Case 1 (Shelton *et al.* 2007). This cat was euthanized due to complications of a fibrosarcoma.

Field Code Changed
Field Code Changed
Field Code Changed
Field Code Changed
Field Code Changed
Field Code Changed
Field Code Changed
Field Code Changed