**Table-1: Degenerative myelopathy affected and neurologically normal control dogs spinal cord samples**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Dogs #** | **Breed** | **Sex** | **Age at Death** | **Genotype** | **Disease Status/Disease Grade** |
| 1 | Wire haired Fox Terrier | MC | 12.8 | A/A | DM/2 |
| 2 | Boxer | FS | 11.2 | A/A | DM/2.5 |
| 3 | Pembroke Welsh Corgi | MC | 12.6 | A/A | DM/2.5 |
| 4 | Pembroke Welsh Corgi | FS | 12.8 | A/A | DM/3 |
| 5 | Beagle | F | 8.5 | G/G | Control / normal spinal cord |
| 6 | Pembroke Welsh Corgi | FS | 14.2 | A/A | Control / normal spinal cord |
| 7 | Beagle | F | 9.6 | G/G | Control / normal spinal cord |
| 8 | Pembroke Welsh Corgi | FS | 15 | A/G | Control / normal spinal cord |

FS female spayed; MC male castrated; M male; A/A homozygous E40K SOD1; A/G heterozygous E40K SOD1; G/G normal homozygous

**Table-2: Degenerative myelopathy affected dogs (Serum Samples)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Dog #** | **Breed** | **Sex** | **Age at Death** | **Genotype** | **Disease Grade** |
| 1 | Boxer | FS | 11.5 | A/A | 3 |
| 2 | Boxer | M | 9.3 | A/A | undetermined |
| 3 | Boxer | FS | 11.9 | A/A | 3 |
| 4 | Boxer | MC | 10 | A/A | 3 |
| 5 | Pembroke Welsh Corgi | MC | 12.6 | A/A | 3 |
| 6 | Pembroke Welsh Corgi | FS | 15 | A/A | 3 |
| 7 | Pembroke Welsh Corgi | MC | 10.8 | A/A | 3 |
| 8 | Bernese Mountain Dog | MC | 8 | A/A | 4 |
| 9 | Pembroke Welsh Corgi | MC | 11.8 | A/A | 3 |
| 10 | Boxer | FS | 10.5 | A/A | 3 |
| 11 | Boxer | FS | 10.5 | A/A | 3 |
| 12 | Boxer | MC | 8 | A/A | 3 |

FS female spayed; MC male castrated; M male; A/A homozygous E40K SOD1

**Table-3: Healthy control dogs (Serum Samples)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Dog #** | **Breed** | **Sex** | **Age at Death** | **Genotype** | **Reason for Death** |
| 1 | Pembroke Welsh Corgi | FS | 14 | A/A | Disk herniation |
| 2 | Pembroke Welsh Corgi | FS | 10.75 | A/A | Spinal cord neoplasm |
| 3 | Standard Schnauzer | MC | 14 | A/A | Metastatic carcinoma |
| 4 | Chesapeake Bay Retriever | MC | 13.5 | A/G | Chronic renal failure |
| 5 | Bernese Mountain Dog | M | 9 | A/G | Osteoarthritis |
| 6 | Bernese Mountain Dog | M | 10 | G/G | Neoplasia |
| 7 | German Shepherd Dog | MC | 10.5 | G/G | Disk herniation |
| 8 | Chesapeake Bay Retriever | M | 13.5 | G/G | Metastatic neoplasia |
| 9 | Mixed Breed Dog | FS | 13 | A/G | Oral melanoma |
| 10 | Rhodesian Ridgeback | FS | 11.8 | G/G | Abdominal mass |

FS female spayed; MC male castrated; M male; A/A homozygous E40K SOD1; A/G heterozygous E40K SOD1; G/G normal homozygous



**Supplemental Figure-1.** Serum-derived exosomal TDP-43 and phosphorylated TDP-43 profile in dogs with DM (n=12; Table-2 Supplemental Data : dog # 1,2,3,4,5,6,7,8,9,10,11,12)



**Supplemental Figure-2 .** Serum derived exosomal TDP-43 and Phosphorylated TDP-43 profile in control dogs (n=10; Table-3 Supplemental Data : dog # 1,2,3,4,5,6,7,8,9,10 )