Supplementary Table captions

Table e-1 List of rare variants in *SLITRK1-6,* and *HDC* identified in our cohorts of TS patients.

Table e-2 Primer pairs used in this study.

Table e-3 List of rare variants identified by exome sequencing in the 12 TS individuals with variants in *SLITRK1, SLITR3, SLITRK5, SLITRK6* and *HDC.*

Table e-4 List of genes containing rare variants in at least two individuals of the 12 TS individuals analyzed by exome sequencing.

Table e-5 List of CNVs and *de novo* variants identified in the 12 TS individuals with variants in *SLITRK1, SLITR3, SLITRK5, SLITRK6* and *HDC.*

Table e-6 List of GO biological processes enriched in the 3,041 genes with rare variants in the 12 families analyzed by exome sequencing.

Table e-7 List of GO biological processes enriched in the 424 genes with rare variants in at least two individuals of the 12 families analyzed by exome sequencing.

Table e-8 List of genes preferentially expressed in in basal ganglia or substantia nigra (source: GTEX database)

Table e-9 List of rare variants in genes preferentially expressed in basal ganglia or substantia nigra in the 12 TS individuals analyzed by exome sequencing.

Table e-10 List of variants in *PCDH10, NTS, NTSR1, NTSR2, OPRK1* and *OPRM1* identified in the TS and control populations.

Table e-11 List of rare variants in *PCDH10, NTS, NTSR1, NTSR2, OPRK1* and *OPRM1* present in individuals from the gnomAD database.

Table e-12 Genotype frequencies of *OPRK1* Asn133Asp/Asn40Asp (rs1799971) in different populations present in gnomAD.