HSP CAUSATIVE GENES
ALS2 (Alsin)[1,2], ***ALDH18A1*** (Aldehyde dehydrogenase 18 family member A1)[3,4], ***AP4B1*** (Adaptor Related Protein Complex 4 Subunit Beta 1)[5], ***AP4E1*** (Adaptor Related Protein Complex 4 Subunit Epsilon 1)[5,6], ***AP4M1***(Adaptor Related Protein Complex 4 Subunit Mu 1)[7], ***AP4S1*** (Adaptor Related Protein Complex 4 Subunit Sigma 1)[8], ***AP5Z1*** (Adaptor Related Protein Complex 5 Subunit Zeta 1)[9], ***ARL6IP1*** (ADP Ribosylation Factor Like GTPase 6 Interacting Protein 1)[1], ***ATAD3A*** (ATPase Family AAA Domain Containing 3A)[10], ***ATL1***(Atlastin GTPase 1)[11], ***B4GALNT1*** (Beta-1,4-N-Acetyl-Galactosaminyltransferase 1)[12], ***BICD2*** (BICD Cargo Adaptor 2)[13], ***BSCL2*** (BSCL2 Lipid Droplet Biogenesis Associated, Seipin)[14], ***C19orf12*** (Chromosome 19 Open Reading Frame 12)[15], ***CAPN1***(Calpain 1)[16], ***CCT5*** (Chaperonin Containing TCP1 Subunit 5)[17], ***CYP2U1*** (Cytochrome P450 Family 2 Subfamily U Member 1)[18], ***CYP7B1*** (Cytochrome P450 Family 7 Subfamily B Member 1)[19], ***DDHD1*** (DDHD Domain Containing 1)[20,21], ***DDHD2*** (DDHD Domain Containing 2)[18], ***ERLIN2*** (ER Lipid Raft Associated 2)[22], ***ENTPD1*** (Ectonucleoside Triphosphate Diphosphohydrolase 1)[1], ***EPT1*** (Ethanolaminephosphotransferase 1)[23], ***ERLIN1*** (ER Lipid Raft Associated 1)[1], ***FARS2*** (Phenylalanyl-TRNA Synthetase 2, Mitochondrial)[24], ***FA2H*** (Fatty Acid 2-Hydroxylase)[25], ***GBA2*** (Glucosylceramidase Beta 2)[18], ***IBA57*** (Iron-Sulfur Cluster Assembly Factor IBA57)[26], ***KCNA2*** (Potassium Voltage-Gated Channel Subfamily A Member 2)[27], ***KIAA0196/WASHC5*** (WASH Complex Subunit 5)[28], ***KIF1A*** (Kinesin Family Member 1A)[29], ***KIF5A*** (Kinesin Family Member 5A)[30], ***KY*** (Kyphoscoliosis Peptidase)[31], ***L1CAM*** (L1 Cell Adhesion Molecule)[32,33], ***LYST*** (Lysosomal Trafficking Regulator)[34], ***NIPA1*** (NIPA Magnesium Transporter 1)[35,36], ***NT5C2*** (5'-Nucleotidase, Cytosolic II)[1], ***PCYT2*** (Phosphate Cytidylyltransferase 2, Ethanolamine)[37], ***PLP1*** (Proteolipid Protein 1)[38], ***PNPLA6*** (Patatin Like Phospholipase Domain Containing 6)[39,40], ***RAB3GAP2*** (RAB3 GTPase Activating Non-Catalytic Protein Subunit 2)[41,42], ***REEP1*** (Receptor Accessory Protein 1)[43], ***REEP2*** (Receptor Accessory Protein 2)[44], ***RTN2*** (Reticulon 2)[45], ***SETX*** (Senataxin)[46],***SLC33A1*** (Solute Carrier Family 33 Member 1)[47], ***SPAST*** (Spastin)[48], ***SPG11*** (SPG11 Vesicle Trafficking Associated, Spatacsin)[49], ***SPG21/ACP33*** (SPG21 Abhydrolase Domain Containing, Maspardin)[50], ***SPG7*** (SPG7 Matrix AAA Peptidase Subunit, Paraplegin)[51], ***SPG80/UBAP1*** (Ubiquitin Associated Protein 1)[52], ***TECPR2*** (Tectonin Beta-Propeller Repeat Containing 2)[53], ***TFG*** (Trafficking From ER To Golgi Regulator)[54], ***TUBB4A*** (Tubulin Beta 4A Class IVa)[55], ***VCP*** (Valosin Containing Protein)[56], ***VPS37A*** (VPS37A Subunit Of ESCRT-I)[57], ***ZFYVE26*** (Zinc Finger FYVE-Type Containing 26)[58,59], ***ZFYVE27*** (Zinc Finger FYVE-Type Containing 27)[60]
HSP ASSOCIATED GENES
ABCD1 (ATP Binding Cassette Subfamily D Member 1)[61], ***ADAR*** (Adenosine Deaminase RNA Specific)[62], ***ALDH3A2*** (Aldehyde Dehydrogenase 3 Family Member A2)[63], ***AMPD2*** (Adenosine Monophosphate Deaminase 2)[1], ***ARSA*** (Arylsulfatase A)[64], ***ARSI*** (Arylsulfatase I precursor)[1], ***ATP13A2*** (ATPase Cation Transporting 13A2)[65], ***CPT1C*** (Carnitine Palmitoyltransferase 1C)[66], ***ELOVL1*** (ELOVL Fatty Acid Elongase 1)[64], ***FLRT1*** (Fibronectin Leucine Rich Transmembrane Protein 1)[1], ***GALC*** (Galactosylceramidase)[64], ***GCH1*** (GTP Cyclohydrolase 1)[67], ***GRN*** (Granulin Precursor)[68], ***HSPD1/ HSP60*** (Heat Shock Protein Family D (Hsp60) Member 1)[69,70], ***IFIH1*** (Interferon Induced With Helicase C Domain 1)[62], ***KIF1C*** (Kinesin Family Member 1C)[71], ***MAG*** (Myelin-associated glycoprotein)[1,72], ***MARS*** (Methionyl-TRNA Synthetase)[1], ***MFN2*** (Mitofusin-2)[73], ***MT-ATP6*** (Mitochondrially Encoded ATP Synthase Membrane Subunit 6)[74], ***OPA1*** (Dynamin-like 120 kDa protein)[73], ***OPA3*** (Outer Mitochondrial Membrane Lipid Metabolism Regulator OPA3)[75], ***PGAP1*** (Post-GPI Attachment To Proteins Inositol Deacylase 1)[1], ***PLA2G6*** (Phospholipase A2 Group VI)[76], ***POLR3A*** (RNA Polymerase III Subunit A)[77], ***SERAC1*** (Serine Active Site Containing 1)[64], ***SLC16A2*** (Solute Carrier Family 16 Member 2)[78,79], ***SPART*** (Spartin)[80], ***SPG20*** (Troyer syndrome)[63], ***TRPV4*** (Transient Receptor Potential Cation Channel Subfamily V Member 4)[81], ***USP8*** (Ubiquitin Specific Peptidase 8)[1], ***WDR48*** (WD Repeat Domain 48)[1], ***ZFR*** (Zinc Finger RNA Binding Protein)[1]
HSP LINKED GENES
C12orf65 (Probable peptide chain release factor C12orf65, mitochondrial)[82], ***CYP27A1*** (Cytochrome P450 Family 27 Subfamily A Member 1)[64], ***GAD1*** (Glutamate Decarboxylase 1)[83,84], ***GJC2*** (Gap Junction Protein Gamma 2)[85], ***KLC2*** (Kinesin Light Chain 2)[82], ***RIPK5/DSTYK*** (Dual serine/threonine and tyrosine protein kinase)[86], ***UCHL1*** (Ubiquitin C-Terminal Hydrolase L1)[87]
PLS GENES
CAUSATIVE: ***ALS2***[2,88] ASSOCIATED: ***ALS15*** (Ubiquilin 2)[89], ***C9orf72*** (C9orf72-SMCR8 Complex Subunit)[90], ***DCTN1*** (Dynactin Subunit 1)[90,91], ***ERLIN2*** (ER Lipid Raft Associated 2)[92], ***PARK2*** (Parkin)[90,93] LINKED: ***FIG4*** (FIG4 Phosphoinositide 5-Phosphatase)[94], ***SPG7*** (SPG7 Matrix AAA Peptidase Subunit, Paraplegin)[95]

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