



Condition	Gene	Autosomal recessive	X-linked	G2L	G4L
17-Beta-Hydroxysteroid Dehydrogenase Deficiency, Type III	HSD17B3	•		•	•
21-Hydroxylase-Deficient Congenital Adrenal Hyperplasi	CYP21A2	•		•	•
2-Methylbutyryl-CoA Dehydrogenase Deficiency	ACADSB	•			•
3-Hydroxy-3-Methylglutaryl-CoA Lyase Deficiency	HMGCL	•			•
3-Hydroxyacyl-CoA Dehydrogenase Deficiency	HADH	•			•
3-Hydroxyisobutryl-CoA Hydrolase Deficiency	HIBCH	•			•
3-Methylcrotonyl-CoA Carboxylase 1 Deficiency	MCCC1	•			•
3-Methylcrotonyl-CoA Carboxylase 2 Deficiency	MCCC2	•			•
Abetalipoproteinemia	MTTP	•			•
Achalasia-Addisonianism-Alacrimia Syndrome	AAAS	•			•
Achondrogenesis, Type 1B	SLC26A2	•		-	-
Achromatopsia CNGB3-Related	CNGB3	•		•	•
Acrodermatitis Enteropathica Acute Infantile Liver Failure, TRMU-Related	SLC39A4 TRMU				•
Adenosine Deaminase Deficiency	ADA				•
Adenosine bearinings beneficiety Adrenal Hyperplasia	HSD3B2	•			•
Adrenal Hyperplasia V	CYP17A1				•
AdrenoleukoDystrophy	ABCD1		•		•
Aicardi-Goutieres syndrom (AGS)	RNASEH2A	•			•
Aicardi-Goutieres syndrom (AGS)	RNASEH2B	•			•
Aicardi-Goutieres syndrom (AGS)	RNASEH2C	•			•
Aicardi-Goutieres syndrom (AGS)	SAMHD1	•			•
Aicardi-Goutieres Syndrome 1	TREX1	•			•
AICA-Ribosiduria	ATIC	•			•
Albinism, Oculocutaneous, Type I	TYR	•		•	•
Albinism, Oculocutaneous, Type II	OCA2	•			•
Albinism, Oculocutaneous, Type III	TYRP1	•			•
Albinism, Oculocutaneous, Type IV	SLC45A2	•			•
Albinism, Oculocutaneous, Type VII	LRMDA	•			•
Alkaptonuria	HGD	•		•	•
Alpers Syndrome	POLG	•		•	•
Alpha thalassemia	HBA1	•		•	•
Alpha thalassemia	HBA2	•		•	•
Alpha-Mannosidosis	MAN2B1	•			•
Alpha-Methylacetoacetic Aciduria	ACAT1	•			•
Alpha-N-Acetylgalactosaminidase Deficiency, Type 1 (Schindler Disease)	NAGA	•			•
Alport Syndrome, COL4A3-Related	COL4A3	•			•
Alport Syndrome, COL4A4-Related	COL4A4	•			•
Alport Syndrome, COL4A5-Related	COL4A5	-	•		-
Alstrom Syndrome	ALMS1	•			•
Amish Infantile Epilepsy Syndrome Argininosuccinic Aciduria	ST3GAL5 ASL	•		•	•
Argminosuccinic Aciduna Aromatic L-amino acid Decarboxylase Deficiency	DDC	•			•
Arthrogryposis, Mental Retardation and Seizures	SLC35A3	•			•
Arthrogryposis, Renal Dysfunction and Cholestasis 1	VPS33B				•
Asparagine Synthetase Deficiency	ASNS	•			•
Aspartylglycosaminuria	AGA	•		•	•
Ataxia	TTPA	•			•
Ataxia Telangiectasia	ATM	•		•	•
Bardet-Biedl Syndrome 1	BBS1	•		•	•
Bardet-Biedl Syndrome 10	BBS10	•			•
Bardet-Biedl Syndrome 11	TRIM32	•			•
Bardet-Biedl Syndrome 12	BBS12	•			•
Bardet-Biedl Syndrome 13 / Meckel-Gruber Syndrome 1 / Joubert Syndrome 28	MKS1	•		•	•
Bardet-Biedl Syndrome 16	SDCCAG8	•			•
Bardet-Biedl Syndrome 17	LZTFL1	•			•
Bardet-Biedl Syndrome 18	BBIP1	•			•
Bardet-Biedl Syndrome 19	IFT27	•			•
Bardet-Biedl Syndrome 2	BBS2	•		•	•
Bardet-Biedl Syndrome 20	IFT172	•			•
Bardet-Biedl syndrome 21 / Cone-Rod Dystrophy 16 / Retinitis Pigmentosa 64	C8orf37	•			•
Bardet-Biedl Syndrome 3	ARL6	•			•
Bardet-Biedl Syndrome 4	BBS4	•			•
Bardet-Biedl Syndrome 5	BBS5	•			•
Bardet-Biedl Syndrome 6	MKKS	•			•
Bardet-Biedl Syndrome 7	BBS7	•			•
Bardet-Biedl Syndrome 8	TTC8	•			•
Bardet-Biedl Syndrome 9	BBS9	•			•
Bartter Syndrome	BSND	•			•
Bernard-Soulier Syndrome, Type A1	GP1BA	•			•
Bernard-Soulier Syndrome, Type C	GP9	•			•
Beta-Thalassemia	HBB	•		•	•
Bile Acid Synthesis Defect, Type 4	AMACR BTD	•			•
Biotinidase Deficiency Riemetrand Chandradysplasia		•		•	•
Bloom Syndrome	PTH1R BLM	•			•
Bloom Syndrome Prittle Corpos Syndrome 1		<u> </u>		_	-
Brittle Cornea Syndrome 1	ZNF469				•



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Canavan Disease	ASPA	•		•	•
Carbamoyl-Phosphate Synthetase 1 Deficiency	CPS1	•			•
Carnitine Deficiency	SLC22A5	•			•
Carnitine Palmitoyltransferase Deficiency, Type 1A	CPT1A	•			•
Carnitine-acylcarnitine Translocase Deficiency	SLC25A20	•			•
Carpenter Syndrome	RAB23	•			•
Cartilage-Hair Hypoplasia	RMRP	•		•	
	VLDLR			•	-
Cerebellar Hypoplasia and Mental Retardation		_	_		•
Cerebellar Hypoplasia, Type 1	EXOSC3	•			•
Cerebral Creatine Deficiency Syndrome 2	GAMT	•			•
Cerebral Dysgenesis, Neuropathy, Ichthyosis and Palmoplantar Keratoderma Syndrome	SNAP29	•			•
Cerebrotendinous Xanthomatosis	CYP27A1	•			•
Ceroid Lipofuscinosis	MFSD8	•			•
Ceroid Lipofuscinosis	CLN8	•			•
Charcot-Marie-Tooth Disease, Type 2B1	LMNA	•			•
Charcot-Marie-Tooth Disease, Type 2EE	MPV17	•			•
Charcot-Marie-Tooth Disease, Type 2S	IGHMBP2	•			•
Charcot-Marie-Tooth Disease, Type 4F	PRX				
	FGD4	_			-
Charcot-Marie-Tooth Disease, Type 4H		•			•
Choreoacanthocytosis	VPS13A	•			•
Choroideremia	CHM		•		•
Chronic Granulomatous Disease 1	NCF1	•			•
Chronic Granulomatous Disease 4	CYBA	•		•	•
Ciliary Dyskinesia, Type 1	DNAI1	•			•
Ciliary Dyskinesia, Type 9	DNAI2	•			•
Citrin Deficiency	SLC25A13	•		•	
Citrullinemia, Type 1	ASS1	•			•
					•
Classical homocystinuria	CBS	•		•	•
Coenzyme Q10 Deficiency, Type 2	PDSS1	•			•
Coenzyme Q10 Deficiency, Type 4	COQ8A	•			•
Cohen Syndrome	VPS13B	•			•
Cold-induced Sweating Syndrome 1	CRLF1	•			•
Colobomatous Microphthalmia	STRA6	•			•
Combined Malonic and Methylmalonic Aciduria	ACSF3	•			•
Combined Oxidative Phosphorylation Deficiency 1	GFM1	•			•
					•
Combined Oxidative Phosphorylation Deficiency 3	TSFM	•			•
Cone-Rod Dystrophy and Hearing Loss 2	CEP250	•			•
Congenital Adrenal Hyperplasia, 11-b hydroxylase	CYP11B1	•		•	•
Congenital Amegakaryocytic Thrombocytopenia	MPL	•			•
Congenital Disorder of Glycosylation, Type 1a	PMM2	•		•	•
Congenital Disorder of Glycosylation, Type Ib	MPI	•			•
Congenital Disorder of Glycosylation, Type Ic	ALG6	•			•
Congenital Disorder of Glycosylation, Type Ie	DPM1	•			•
Congenital Disorder of Glycosylation, Type II	B4GALT1				
	MGAT2	•			•
Congenital Disorder of Glycosylation, Type lia		•			•
Congenital Disorder of Glycosylation, Type IIb	MOGS	•			•
Congenital Disorder of Glycosylation, Type lic	SLC35C1	•			•
Congenital Disorder of Glycosylation, Type Iif	SLC35A1	•			•
Congenital Disorder of Glycosylation, Type Ik	ALG1	•			•
Congenital Erythropoietic Porphyria	UROS	•			•
Congenital Hypothyroidism	PAX8	•			•
Congenital Hypothyroidism	TSHR	•			•
Congenital Insensitivity to pain with Anhidrosis	NTRK1	•			•
Congenital Myasthenic Syndrome 4B	CHRNE	•			
		-			-
Congenital Non-Bullous Ichthyosiform Erythroderma	ABCA12	•			•
Congenital Thrombotic Thrombocytopenic Purpura	ADAMTS13	•			•
Corneal Endothelial Dystrophy	SLC4A11	•			•
Corpus Callosum Agenesis-Neuronopathy Syndrome	SLC12A6	•			•
Costeff Syndrome	OPA3	•			•
CPT II Deficiency, Infantile	CPT2	•			•
Cutis Laxa Classic, Type 2	ATP6V0A2	•			•
Cutis Laxa, Type IA	FBLN5	•			•
Cutis Laxa, Type IB	EFEMP2	•			•
Cystic Fibrosis	CFTR			•	
Cystinosis	CTNS	•			•
·		-		-	•
Cystinuria	SLC3A1	•			•
Deafness 53	COL11A2	•			•
Deafness 77	LOXHD1	•			•
Dejerine-Sottas Disease	PMP22	•			•
Desmosterolosis	DHCR24	•			•
Dihydropyrimidine Dehydrogenase Deficiency	DPYD	•		•	•
Distal Renal Tubular Acidosis	ATP6V1B1	•			•
Donnai-Barrow Syndrome	LRP2	•			•
Dopa-Responsive Dystonia	TH	•			•
	DMD		•		•
Duchenne Muscular Dystrophy		-	-		-
Dysplasminogenemia	PLG	•			•
Ehlers-Danlos Syndrome, Cardiac Valvular Type	COL1A2	•			•
Ehlers-Danlos Syndrome, Dermatosparaxis Type	ADAMTS2	•			•
Ellis-van Creveld Syndrome	EVC2	•		•	•
					_
Ellis-van Creveld Syndrome	EVC	•			•



Emery-Dreifuss Muscular Dystrophy					
	FHL1		•		•
Emphysema	SERPINA1	•			•
Epidermolysis Bullosa, Type 1	LAMB3	•			•
Epidermolysis Bullosa, Type 2	LAMA3	•			•
Epidermolysis Bullosa, Type 3	LAMC2	•			•
Epidermolysis Bullosa, Type 4	COL17A1	•			•
Epidermolysis Bullosa, Type 5	ITGB4	•			•
Epidermolysis Bullosa, Type 6	ITGA6	•			ě
Ethylmalonic Encephalopathy	ETHE1	•			•
			_		_
Fabry Disease	GLA		•		•
Factor IX Deficiency	F9		•		•
Factor VIII Deficiency	F8		•		•
Factor XI Deficiency	F11	•		•	•
Familial Chloride Diarrhea	SLC26A3	•		•	•
Familial Dysautonomia	ELP1	•		•	•
Familial Hyperinsulinemic Hypoglycemia	ABCC8	•		•	•
Familial Hyperinsulinism	KCNJ11			•	•
Familial Mediterranean Fever	MEFV			•	•
		-		-	-
Fanconi Anemia, Group C	FANCC	•		•	•
Fanconi Anemia, Group G	FANCG	•		•	•
Fanconi Anemia, Troup A	FANCA	•		•	•
Fetal Akinesia Deformation Sequence	RAPSN	•			•
Fragile X Syndrome	FMR1		•		•
French Canadian Type of Leigh Syndrome	LRPPRC	•			•
Fucosidosis	FUCA1	•			
		-			•
Fuhrmann Syndrome	WNT7A	•			•
Fumarase Deficiency	FH	•			•
Galactokinase Deficiency, Type II	GALK1	•		•	•
Galactosemia	GALT	•		•	•
Gaucher Disease	GBA	•		•	•
Gitelman Syndrome	SLC12A3	•		•	
	ETFA	•			•
Glutaric Acidemia IIA		-			•
Glutaric Acidemia IIC	ETFDH	•			•
Glutaric Acidemia, Type 1	GCDH	•		•	•
Glycine Encephalopathy	GLDC	•			•
Glycogen Storage Disease VII	PFKM	•			•
Glycogen Storage Disease, Type 1A	G6PC1	•		•	•
Glycogen Storage Disease, Type 2 (Pompe Disease)	GAA	•		•	ě
Glycogen Storage Disease, Type 3	AGL	•		•	_
		-		•	•
Glycogen Storage Disease, Type 4	GBE1	•		•	•
Glycogen Storage Disease, Type B	SLC37A4	•			•
GRACILE Syndrome	BCS1L	•			•
Greenberg Skeletal Dysplasia	LBR	•			•
Griscelli Syndrome, Type 1	MYO5A	•			•
Griscelli Syndrome, Type 2	RAB27A	•			•
Gyrate Atrophy of Choroid and Retina	OAT				•
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Hemochromatosis, Type 2	HJV				
					_
Hemochromatosis, Type 3	TFR2	•			•
Hemochromatosis, Type 3 Hepatic Venoocclusive Disease with Immunodeficiency	SP110	•			•
		•		•	•
Hepatic Venoocclusive Disease with Immunodeficiency	SP110	•		•	•
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1	SP110 ALDOB HPS1				•
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency	SP110 ALDOB HPS1 HLCS	•			•
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria	SP110 ALDOB HPS1 HLCS MTHER	•			•
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria Homocystinuria-Megaloblastic Anemia	SP110 ALDOB HPS1 HLCS MTHER MTRR	•			•
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria Homocystinuria-Megaloblastic Anemia Hunter Syndrome	SP110 ALDOB HPS1 HLCS MTHFR MTRR IDS	•	•		•
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria Homocystinuria-Megaloblastic Anemia Hunter Syndrome Hurler syndrome	SP110 ALDOB HPS1 HLCS MTHFR MTRR IDS IDUA	•	•	•	•
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria Homocystinuria-Megaloblastic Anemia Hunter Syndrome Hurler syndrome Hyaline Fibromatosis Syndrome	SP110 ALDOB HPS1 HLCS MTHFR MTRR IDS IDUA ANTXR2	•	•	•	•
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria Homocystinuria-Megaloblastic Anemia Hunter Syndrome Hurler syndrome	SP110 ALDOB HPS1 HLCS MTHFR MTRR IDS IDUA	•	•	•	•
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria Homocystinuria-Megaloblastic Anemia Hunter Syndrome Hurler syndrome Hyaline Fibromatosis Syndrome	SP110 ALDOB HPS1 HLCS MTHFR MTRR IDS IDUA ANTXR2	•	•	•	•
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria Homocystinuria-Megaloblastic Anemia Hunter Syndrome Hurler syndrome Hyaline Fibromatosis Syndrome Hydrolethalus Syndrome	SP110 ALDOB HPS1 HLCS MTHFR MTRR IDS IDUA ANTXR2 HYLS1	•	•	•	•
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria Homocystinuria-Megaloblastic Anemia Hunter Syndrome Hurler syndrome Hyaline Fibromatosis Syndrome Hydrolethalus Syndrome Hyperoxaluria, Type I Hyperoxaluria, Type II	SP110 ALDOB HPS1 HLCS MTHFR MTRR IDS IDUA ANTXR2 HYLS1 AGXT GRHPR	•	•	•	•
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria Homocystinuria-Megaloblastic Anemia Hunter Syndrome Hyaline Fibromatosis Syndrome Hydrotethalus Syndrome Hyperoxaluria, Type I Hyperoxaluria, Type II Hyperoxaluria, Type III	SP110 ALDOB HPS1 HLCS MTHFR MTRR IDS IDUA ANTXR2 HYLS1 AGXT GRHPR HOGA1	• • • • • • • • • • • • • • • • •	•	•	•
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria Homocystinuria-Megaloblastic Anemia Hunter Syndrome Hurler syndrome Hyaline Fibromatosis Syndrome Hydrolethalus Syndrome Hyperoxaluria, Type I Hyperoxaluria, Type II Hyperoxaluria, Type III Hyperphenylalaninemia	SP110 ALDOB HPS1 HLCS MTHFR MTRR IDS IDUA ANTXR2 HYLS1 AGXT GRHPR HOGA1 PTS	• • • • • • • • • • • • • • • • • • •	•	•	•
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria Homocystinuria-Megaloblastic Anemia Hunter Syndrome Hurler syndrome Hyaline Fibromatosis Syndrome Hydrotethalus Syndrome Hyperoxaluria, Type I Hyperoxaluria, Type II Hyperoxaluria, Type III Hyperphenylalaninemia Hypoaldosteronism, CMO I Deficiency	SP110 ALDOB HPS1 HLCS MTHFR MTRR IDS IDUA ANTXR2 HYLS1 AGXT GRHPR HOGA1 PTS CYP11B2	• • • • • • • • • • • • • • • • • • •	•	•	•
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria Homocystinuria-Megaloblastic Anemia Hunter Syndrome Hurler syndrome Hyaline Fibromatosis Syndrome Hydrotethalus Syndrome Hydroethalus Syndrome Hyperoxaluria, Type I Hyperoxaluria, Type II Hyperoxaluria, Type III Hyperphenylalaninemia Hypoaldosteronism, CMO I Deficiency Hypohidrotic Ectodermal Dysplasia	SP110 ALDOB HPS1 HLCS MTHFR MTRR IDS IDUA ANTXR2 HYLS1 AGXT GRHPR HOGA1 PTS CYP11B2 EDA	• • • • • • • • • • • • • • • • • • •	•	•	•
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria Homocystinuria-Megaloblastic Anemia Hunter Syndrome Hurler syndrome Hyaline Fibromatosis Syndrome Hydrolethalus Syndrome Hydrolethalus Syndrome Hyperoxaluria, Type II Hyperoxaluria, Type III Hyperphenylalaninemia Hypoaldosteronism, CMO I Deficiency Hypohidrotic Ectodermal Dysplasia Hypomyelinating leukodystrophy 12	SP110 ALDOB HPS1 HLCS MTHFR MTRR IDS IDUA ANTXR2 HYLS1 AGXT GRHPR HOGA1 PTS CYP11B2 EDA VPS11	• • • • • • • • • • • • • • • • • • •	•	•	•
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria Homocystinuria-Megaloblastic Anemia Hunter Syndrome Hurler Syndrome Hyaline Fibromatosis Syndrome Hydrolethalus Syndrome Hyperoxaluria, Type I Hyperoxaluria, Type II Hyperoxaluria, Type III Hyperphenylalaninemia Hypoaldosteronism, CMO I Deficiency Hypohidrotic Ectodermal Dysplasia Hypomyelinating leukodystrophy 12 Hypophosphatasia	SP110 ALDOB HPS1 HLCS MTHFR MTRR IDS IDUA ANTXR2 HYLS1 AGXT GRHPR HOGA1 PTS CYP11B2 EDA VPS11 ALDO	• • • • • • • • • • • • • • • • • • •	•	•	•
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria Homocystinuria-Megaloblastic Anemia Hunter Syndrome Hurler syndrome Hyaline Fibromatosis Syndrome Hydrolethalus Syndrome Hydrolethalus Syndrome Hyperoxaluria, Type II Hyperoxaluria, Type III Hyperphenylalaninemia Hypoaldosteronism, CMO I Deficiency Hypohidrotic Ectodermal Dysplasia Hypomyelinating leukodystrophy 12	SP110 ALDOB HPS1 HLCS MTHFR MTRR IDS IDUA ANTXR2 HYLS1 AGXT GRHPR HOGA1 PTS CYP11B2 EDA VPS11	• • • • • • • • • • • • • • • • • • •	•	•	•
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria Homocystinuria-Megaloblastic Anemia Hunter Syndrome Hurler Syndrome Hyaline Fibromatosis Syndrome Hydrolethalus Syndrome Hyperoxaluria, Type I Hyperoxaluria, Type II Hyperoxaluria, Type III Hyperphenylalaninemia Hypoaldosteronism, CMO I Deficiency Hypohidrotic Ectodermal Dysplasia Hypomyelinating leukodystrophy 12 Hypophosphatasia	SP110 ALDOB HPS1 HLCS MTHFR MTRR IDS IDUA ANTXR2 HYLS1 AGXT GRHPR HOGA1 PTS CYP11B2 EDA VPS11 ALDO	• • • • • • • • • • • • • • • • • • •	•	•	•
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria Homocystinuria-Megaloblastic Anemia Hunter Syndrome Hurler Syndrome Hyaline Fibromatosis Syndrome Hydrolethalus Syndrome Hyperoxaluria, Type I Hyperoxaluria, Type II Hyperoxaluria, Type III Hyperphenylalaninemia Hypoaldosteronism, CMO I Deficiency Hypohidrotic Ectodermal Dysplasia Hypomylianting leukodystrophy 12 Hypophosphatasia Immunodeficiency-Centromeric Instability-Facial Anomalies Syndrome 1 Infantile Striatonigral Degeneration	SP110 ALDOB HPS1 HLCS MTHFR MTRR IDS IDUA ANTXR2 HYLS1 AGXT GRHPR HOGA1 PTS CYP11B2 EDA VPS11 ALPL DNMT3B NUP62	• • • • • • • • • • • • • • • • • • •	•	•	•
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria Homocystinuria-Megaloblastic Anemia Hunter Syndrome Hurler syndrome Hyaline Fibromatosis Syndrome Hydrolethalus Syndrome Hyperoxaluria, Type I Hyperoxaluria, Type II Hyperoxaluria, Type III Hyperphenylalaninemia Hypoaldosteronism, CMO I Deficiency Hypohidrotic Ectodermal Dysplasia Hypomylianing leukodystrophy 12 Hypophosphatasia Immunodeficiency-Centromeric Instability-Facial Anomalies Syndrome 1 Infantile Striatonigral Degeneration Insulin-Like Growth Factor I Deficiency	SP110 ALDOB HPS1 HLCS MTHFR MTRR IDS IDUA ANTXR2 HYLS1 AGXT GRHPR HOGA1 PTS CYP11B2 EDA VPS11 ALPL DNMT3B NUP62 IGF1	• • • • • • • • • • • • • • • • • • •	•	•	•
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria Homocystinuria-Megaloblastic Anemia Hunter Syndrome Hyaline Fibromatosis Syndrome Hydrolethalus Syndrome Hydrolethalus Syndrome Hyperoxaluria, Type I Hyperoxaluria, Type II Hyperoxaluria, Type III Hyperphenylalaninemia Hypoaldosteronism, CMO I Deficiency Hypohidrotic Ectodermal Dysplasia Hypomyelinating leukodystrophy 12 Hypophosphatasia Immunodeficiency-Centromeric Instability-Facial Anomalies Syndrome 1 Infantile Striatonigral Degeneration Insulin-Like Growth Factor I Deficiency Isovaleric Acidemia	SP110 ALDOB HPS1 HLCS MTHFR MTRR IDS IDUA ANTXR2 HYLS1 AGXT GRHPR HOGA1 PTS CYP11B2 EDA VPS11 ALPL DNMT3B NUP62 IGF1 IVD	• • • • • • • • • • • • • • • • • • •	•	•	•
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria Homocystinuria-Megaloblastic Anemia Hunter Syndrome Hyaline Fibromatosis Syndrome Hydrolethalus Syndrome Hydrolethalus Syndrome Hyperoxaluria, Type I Hyperoxaluria, Type II Hyperoxaluria, Type III Hyperoxaluria, Type III Hyperhenylalaninemia Hypoaldosteronism, CMO I Deficiency Hypohidrotic Ectodermal Dysplasia Hypomyelinating leukodystrophy 12 Hypophosphatasia Immunodeficiency-Centromeric Instability-Facial Anomalies Syndrome 1 Infantile Striatonigral Degeneration Insulin-Like Growth Factor I Deficiency Isovaleric Acidemia Jervell and Lange-Nielsen Syndrome	SP110 ALDOB HPS1 HLCS MTHFR MTRR IDS IDUA ANTXR2 HYLS1 AGXT GRHPR HOGA1 PTS CYP11B2 EDA VPS11 ALPL DNMT3B NUP62 IGF1 IVD KCNQ1	• • • • • • • • • • • • • • • • • • •	•	•	•
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria Homocystinuria-Megaloblastic Anemia Hunter Syndrome Hurler syndrome Hyaline Fibromatosis Syndrome Hydrolethalus Syndrome Hyperoxaluria, Type I Hyperoxaluria, Type II Hyperoxaluria, Type III Hyperoxaluria, Type III Hyperhenylalaninemia Hypoaldosteronism, CMO I Deficiency Hypohidrotic Ectodermal Dysplasia Hypomyelinating leukodystrophy 12 Hypophosphatasia Immunodeficiency-Centromeric Instability-Facial Anomalies Syndrome 1 Infantile Striatonigral Degeneration Insulin-Like Growth Factor I Deficiency Isovaleric Acidemia Jervell and Lange-Nielsen Syndrome Joubert Syndrome 1	SP110 ALDOB HPS1 HLCS MTHFR MTRR IDS IDUA ANTXR2 HYLS1 AGXT GRHPR HOGA1 PTS CYP11B2 EDA VPS11 ALPL DNMT3B NUP62 IGF1 IVD KCNQ1 INPP5E	• • • • • • • • • • • • • • • • • • •	•	•	
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria Homocystinuria-Megaloblastic Anemia Hunter Syndrome Hurler syndrome Hyaline Fibromatosis Syndrome Hydrolethalus Syndrome Hyperoxaluria, Type I Hyperoxaluria, Type II Hyperoxaluria, Type III Hyperoxaluria, Type III Hyperphenylalaninemia Hypoaldosteronism, CMO I Deficiency Hypohidrotic Ectodermal Dysplasia Hypomyelinating leukodystrophy 12 Hypophosphatasia Immunodeficiency-Centromeric Instability-Facial Anomalies Syndrome 1 Infantile Striatonigral Degeneration Insulin-Like Growth Factor I Deficiency Isovaleric Acidemia Jervell and Lange-Nielsen Syndrome Joubert Syndrome 1	SP110 ALDOB HPS1 HLCS MTHFR MTRR IDS IDUA ANTXR2 HYLS1 AGXT GRHPR HOGA1 PTS CYP11B2 EDA VPS11 ALPL DNMT3B NUP62 IGF1 IVD KCNQ1 INPP5E KIF7	• • • • • • • • • • • • • • • • • • •	•	•	•
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria Homocystinuria-Megaloblastic Anemia Hunter Syndrome Hurler syndrome Hyaline Fibromatosis Syndrome Hydrolethalus Syndrome Hyperoxaluria, Type I Hyperoxaluria, Type II Hyperoxaluria, Type III Hyperoxaluria, Type III Hyperhenylalaninemia Hypoaldosteronism, CMO I Deficiency Hypohidrotic Ectodermal Dysplasia Hypomyelinating leukodystrophy 12 Hypophosphatasia Immunodeficiency-Centromeric Instability-Facial Anomalies Syndrome 1 Infantile Striatonigral Degeneration Insulin-Like Growth Factor I Deficiency Isovaleric Acidemia Jervell and Lange-Nielsen Syndrome Joubert Syndrome 1	SP110 ALDOB HPS1 HLCS MTHFR MTRR IDS IDUA ANTXR2 HYLS1 AGXT GRHPR HOGA1 PTS CYP11B2 EDA VPS11 ALPL DNMT3B NUP62 IGF1 IVD KCNQ1 INPP5E	• • • • • • • • • • • • • • • • • • •	•	•	
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria Homocystinuria-Megaloblastic Anemia Hunter Syndrome Hurler syndrome Hyaline Fibromatosis Syndrome Hydrolethalus Syndrome Hyperoxaluria, Type I Hyperoxaluria, Type II Hyperoxaluria, Type III Hyperoxaluria, Type III Hyperphenylalaninemia Hypoaldosteronism, CMO I Deficiency Hypohidrotic Ectodermal Dysplasia Hypomyelinating leukodystrophy 12 Hypophosphatasia Immunodeficiency-Centromeric Instability-Facial Anomalies Syndrome 1 Infantile Striatonigral Degeneration Insulin-Like Growth Factor I Deficiency Isovaleric Acidemia Jervell and Lange-Nielsen Syndrome Joubert Syndrome 1	SP110 ALDOB HPS1 HLCS MTHFR MTRR IDS IDUA ANTXR2 HYLS1 AGXT GRHPR HOGA1 PTS CYP11B2 EDA VPS11 ALPL DNMT3B NUP62 IGF1 IVD KCNQ1 INPP5E KIF7	• • • • • • • • • • • • • • • • • • •	•	•	
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria Homocystinuria Homocystinuria-Megaloblastic Anemia Hunter Syndrome Hurler Syndrome Hyaline Fibromatosis Syndrome Hydrolethalus Syndrome Hyperoxaluria, Type I Hyperoxaluria, Type II Hyperoxaluria, Type III Hyperphenylalaninemia Hypoaldosteronism, CMO I Deficiency Hypohidrotic Ectodermal Dysplasia Hypomyelinating leukodystrophy 12 Hypophosphatasia Immunodeficiency-Centromeric Instability-Facial Anomalies Syndrome 1 Infantile Striatonigral Degeneration Insulin-Like Growth Factor I Deficiency Isovaleric Acidemia Jervell and Lange-Nielsen Syndrome Joubert Syndrome 12 Joubert Syndrome 13 Joubert Syndrome 13	SP110 ALDOB HPS1 HLCS MTHFR MTRR IDS IDUA ANTXR2 HYLS1 AGXT GRHPR HOGA1 PTS CVP11B2 EDA VPS11 ALPL DNMT3B NUP62 IGF1 IVD IKCNQ1 INPP5E KIF7 TCTN1 TMEM237	• • • • • • • • • • • • • • • • • • •	•	•	
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria Homocystinuria-Megaloblastic Anemia Hunter Syndrome Hurler Syndrome Hyaline Fibromatosis Syndrome Hydrolethalus Syndrome Hyperoxaluria, Type I Hyperoxaluria, Type II Hyperoxaluria, Type III Hyperphenylalaninemia Hypoaldosteronism, CMO I Deficiency Hypohidrotic Ectodermal Dysplasia Hypomyelinating leukodystrophy 12 Hypophosphatasia Immunodeficiency-Centromeric Instability-Facial Anomalies Syndrome 1 Infantile Striatonigral Degeneration Insulin-Like Growth Factor I Deficiency Isovaleric Acidemia Jervell and Lange-Nielsen Syndrome Joubert Syndrome 12 Joubert Syndrome 13 Joubert Syndrome 15	SP110 ALDOB HPS1 HLCS MTHFR MTRR IDS IDUA ANTXR2 HYLS1 AGXT GRHPR HOGA1 PTS CYP11B2 EDA VPS11 ALPL DNMT3B NUP62 IGF1 IVO KCNQ1 INPPSE KIF7 TCTN1 TMEM237 CEP41	• • • • • • • • • • • • • • • • • • •	•	•	• • • • • • • • • • • • • • • • • • •
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria Homocystinuria-Megaloblastic Anemia Hunter Syndrome Hurler syndrome Hyaline Fibromatosis Syndrome Hydrolethalus Syndrome Hyperoxaluria, Type I Hyperoxaluria, Type II Hyperoxaluria, Type III Hyperphenylalaninemia Hypoaldosteronism, CMO I Deficiency Hypohidrotic Ectodermal Dysplasia Hypomyelinating leukodystrophy 12 Hypophosphatasia Immunodeficiency-Centromeric Instability-Facial Anomalies Syndrome 1 Infantile Striatonigral Degeneration Insulin-Like Growth Factor I Deficiency Isovaleric Acidemia Jervell and Lange-Nielsen Syndrome Joubert Syndrome 12 Joubert Syndrome 13 Joubert Syndrome 15 Joubert Syndrome 15 Joubert Syndrome 15	SP110 ALDOB HPS1 HLCS MTHFR MTRR IDS IDUA ANTXR2 HYLS1 AGXT GRHPR HOGA1 PTS CYP11B2 EDA VPS11 ALPL DNMT3B NUP62 IGF1 IVD KCNQ1 INPPSE KIF7 TCTN1 TMEM237 CEP41 TMEM138	• • • • • • • • • • • • • • • • • • •	•	•	
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria Homocystinuria—Homocystinuria—Homocystinuria—Homocystinuria—Homocystinuria—Hunter Syndrome Hurler Syndrome Hyaline Fibromatosis Syndrome Hydrolethalus Syndrome Hydrolethalus Syndrome Hyperoxaluria, Type II Hyperoxaluria, Type III Hyperoxaluria, Type III Hyperphenylalaninemia Hypoaldosteronism, CMO I Deficiency Hypohidrotic Ectodermal Dysplasia Hypomyelinating leukodystrophy 12 Hypophosphatasia Immunodeficiency-Centromeric Instability-Facial Anomalies Syndrome 1 Infantile Striatonigral Degeneration Insulin-Like Growth Factor I Deficiency Isovaleric Acidemia Jervell and Lange-Nielsen Syndrome Joubert Syndrome 12 Joubert Syndrome 13 Joubert Syndrome 15 Joubert Syndrome 15 Joubert Syndrome 17	SP110 ALDOB HPS1 HLCS MTHFR MTRR IDS IDUA ANTXR2 HYLS1 AGXT GRHPR HOGA1 PTS CYP11B2 EDA VPS11 ALPL DNMT3B NUP62 IGF1 IVD KCNQ1 INPPSE KIF7 TCTN1 TMEM237 CEP41 TMEM138 CPLANE1	• • • • • • • • • • • • • • • • • • •	•		
Hepatic Venoocclusive Disease with Immunodeficiency Hereditary Fructose Intolerance Hermansky-Pudlak Syndrome 1 Holocarboxylase Synthetase Deficiency Homocystinuria Homocystinuria-Megaloblastic Anemia Hunter Syndrome Hurler syndrome Hyaline Fibromatosis Syndrome Hydrolethalus Syndrome Hyperoxaluria, Type I Hyperoxaluria, Type II Hyperoxaluria, Type III Hyperphenylalaninemia Hypoaldosteronism, CMO I Deficiency Hypohidrotic Ectodermal Dysplasia Hypomyelinating leukodystrophy 12 Hypophosphatasia Immunodeficiency-Centromeric Instability-Facial Anomalies Syndrome 1 Infantile Striatonigral Degeneration Insulin-Like Growth Factor I Deficiency Isovaleric Acidemia Jervell and Lange-Nielsen Syndrome Joubert Syndrome 12 Joubert Syndrome 13 Joubert Syndrome 15 Joubert Syndrome 15 Joubert Syndrome 15 Joubert Syndrome 15	SP110 ALDOB HPS1 HLCS MTHFR MTRR IDS IDUA ANTXR2 HYLS1 AGXT GRHPR HOGA1 PTS CYP11B2 EDA VPS11 ALPL DNMT3B NUP62 IGF1 IVD KCNQ1 INPPSE KIF7 TCTN1 TMEM237 CEP41 TMEM138	• • • • • • • • • • • • • • • • • • •	•		



Genetics		1		1	
Joubert Syndrome 20	TMEM231	•			•
Joubert Syndrome 21	CSPP1	•			•
Joubert Syndrome 22	PDE6D	•			•
Joubert Syndrome 23	KIAA0586	•			•
Joubert Syndrome 24	TCTN2	•			
Joubert Syndrome 27	B9D1	•			
·	AHI1	•			-
Joubert Syndrome 3		-			•
Joubert Syndrome 4	NPHP1	•			•
Joubert Syndrome 5	CEP290	•			•
Joubert Syndrome 6	TMEM67	•			•
Joubert Syndrome 7	RPGRIP1L	•			•
Joubert Syndrome 8	ARL13B	•			•
Joubert Syndrome 9	CC2D2A	•			•
Juvenile Amyotrophic Lateral Sclerosis 2	ALS2	•			•
Juvenile Hemochromatosis, Type 2	HAMP				
, N	CLN3	-			-
Juvenile Neuronal Ceroid Lipofuscinose		•			•
Juvenile Paget Disease	TNFRSF11B	•			•
Juvenile Retinoschisis	RS1		•		•
Kenny-Caffey Syndrome, Type 1	TBCE	•			•
Krabbe Disease	GALC	•			•
Lamellar Ichthyosis	TGM1	•			•
Late Infantile Neuronal Ceroid Lipofuscinoses	CLN6	•			•
Lathosterolosis	SC5D				•
	KCNJ13	-			•
Leber Congenital Amaurosis 16		-			_
Leber Congenital Amaurosis 2	RPE65	•			•
Leprechaunism	INSR	•			•
Lethal Congenital Contracture Syndrome 1	GLE1	•		•	•
Lethal Congenital Contracture Syndrome 2	ERBB3	•			•
Lethal Osteosclerotic Bone Dysplasia	FAM20C	•			•
Leukoencephalopathy with Vanishing White Matter	EIF2B5	•			ā
		•			-
Limb-Girdle Muscular Dystrophy, Type 1	CAPN3	-			•
Limb-Girdle Muscular Dystrophy, Type 17	PLEC	•			•
Limb-Girdle Muscular Dystrophy, Type 2	DYSF	•			•
Limb-Girdle Muscular Dystrophy, Type 23	LAMA2	•			•
Limb-Girdle Muscular Dystrophy, Type 3	SGCA	•			•
Limb-Girdle Muscular Dystrophy, Type 4	SGCB	•			•
Limb-Girdle Muscular Dystrophy, Type 5	SGCG	_			
	FKRP	•			
Limb-Girdle Muscular Dystrophy, Type 5C		•			•
Limb-Girdle Muscular Dystrophy, Type C1	POMT1	•			•
Limb-Girdle Muscular Dystrophy, Type C3	POMGNT1	•		•	•
Lipoid Adrenal Hyperplasia	STAR	•			•
Lipoprotein Lipase Deficiency	LPL	•			•
Long-Chain Hydroxyacyl-CoA Dehydrogenase Deficiency	HADHA	•			•
Lysinuric Protein Intolerance	SLC7A7	•			•
Mandibuloacral Dysplasia	ZMPSTE24	-			•
		•			
Maple syrup urine Disease, Type 1A	BCKDHA	•		•	•
Maple syrup urine Disease, Type 1B	BCKDHB	•		•	•
Maple syrup urine Disease, Type II	DBT	•			•
Maple Syrup Urine Disease, Type III	DLD	•		•	•
Marinesco-Sjögren Syndrome	SIL1	•			•
Medium Chain Acyl-CoA Dehydrogenase Deficiency	ACADM	•		•	•
Megalencephalic Leukoencephalopathy 1	MLC1	•			
		-		_	-
Metachromatic Leukodystrophy	ARSA	•		•	•
Methylmalonic Aciduria, MMAB-Related	MMAB				•
		•			
Methylmalonic Aciduria, MMACHC-Related	MMACHC	•			•
Methylmalonic Aciduria, MMACHC-Related Methylmalonic Aciduria, MMUT-Related	MMACHC MMUT	-			•
		•			•
Methylmalonic Aciduria, MMUT-Related Methylmalonic Aciduria, MMAA-Related	MMUT MMAA	•			•
Methylmalonic Aciduria, MMUT-Related Methylmalonic Aciduria, MMAA-Related Mitochondrial Complex I Deficiency, ACAD9-Related	MMUT MMAA ACAD9	•			•
Methylmalonic Aciduria, MMUT-Related Methylmalonic Aciduria, MMAA-Related Mitochondrial Complex I Deficiency, ACAD9-Related Mitochondrial DNA depletion Syndrome 1, TYMP-Related	MMUT MMAA ACAD9 TYMP	•			•
Methylmalonic Aciduria, MMUT-Related Methylmalonic Aciduria, MMAA-Related Mitochondrial Complex I Deficiency, ACAD9-Related Mitochondrial DNA depletion Syndrome 1, TYMP-Related Mitochondrial Trifunctional Protein Deficiency 2	MMUT MMAA ACAD9 TYMP HADHB	•			•
Methylmalonic Aciduria, MMUT-Related Methylmalonic Aciduria, MMAA-Related Mitochondrial Complex I Deficiency, ACAD9-Related Mitochondrial DNA depletion Syndrome 1, TYMP-Related Mitochondrial Trifunctional Protein Deficiency 2 Molybdenum Cofactor Deficiency, Type A	MMUT MMAA ACAD9 TYMP HADHB MOCS1	•			•
Methylmalonic Aciduria, MMUT-Related Methylmalonic Aciduria, MMAA-Related Mitochondrial Complex I Deficiency, ACAD9-Related Mitochondrial DNA depletion Syndrome 1, TYMP-Related Mitochondrial Trifunctional Protein Deficiency 2 Molybdenum Cofactor Deficiency, Type A Mucolipidosis II/IIIA	MMUT MMAA ACAD9 TYMP HADHB MOCS1 GNPTAB	•		•	•
Methylmalonic Aciduria, MMUT-Related Methylmalonic Aciduria, MMAA-Related Mitochondrial Complex I Deficiency, ACAD9-Related Mitochondrial DNA depletion Syndrome 1, TYMP-Related Mitochondrial Trifunctional Protein Deficiency 2 Molybdenum Cofactor Deficiency, Type A	MMUT MMAA ACAD9 TYMP HADHB MOCS1	•		•	•
Methylmalonic Aciduria, MMUT-Related Methylmalonic Aciduria, MMAA-Related Mitochondrial Complex I Deficiency, ACAD9-Related Mitochondrial DNA depletion Syndrome 1, TYMP-Related Mitochondrial Trifunctional Protein Deficiency 2 Molybdenum Cofactor Deficiency, Type A Mucolipidosis II/IIIA	MMUT MMAA ACAD9 TYMP HADHB MOCS1 GNPTAB	• • • • • • • • • • • • • • • • • • •		•	•
Methylmalonic Aciduria, MMUT-Related Methylmalonic Aciduria, MMAA-Related Mitochondrial Complex I Deficiency, ACAD9-Related Mitochondrial DNA depletion Syndrome 1, TYMP-Related Mitochondrial Trifunctional Protein Deficiency 2 Molybdenum Cofactor Deficiency, Type A Mucolipidosis II/IIIA Mucolipidosis III gamma	MMUT MMAA ACAD9 TYMP HADHB MOCS1 GNPTAB GNPTG	• • • • • • • • • • • • • • • • • • •		•	•
Methylmalonic Aciduria, MMUT-Related Methylmalonic Aciduria, MMAA-Related Mitochondrial Complex I Deficiency, ACAD9-Related Mitochondrial DNA depletion Syndrome 1, TYMP-Related Mitochondrial Trifunctional Protein Deficiency 2 Molybdenum Cofactor Deficiency, Type A Mucolipidosis II/IIIA Mucolipidosis III gamma Mucolipidosis, Type IV Mucopolysaccharidosis, Type IVB	MMUT MMAA ACAD9 TYMP HADHB MOCS1 GNPTAB GNPTG MCOLN1 GLB1	• • • • • • • • • • • • • • • • • • •		•	•
Methylmalonic Aciduria, MMUT-Related Methylmalonic Aciduria, MMAA-Related Mitochondrial Complex I Deficiency, ACAD9-Related Mitochondrial DNA depletion Syndrome 1, TYMP-Related Mitochondrial Trifunctional Protein Deficiency 2 Molybdenum Cofactor Deficiency, Type A Mucolipidosis II/IIIA Mucolipidosis III gamma Mucolipidosis, Type IV Mucopolysaccharidosis, Type IVB Mucopolysaccharidosis, Type IX	MMUT MMAA ACAD9 TYMP HADHB MOCS1 GNPTAB GNPTG MCOLN1 GLB1 HYAL1	• • • • • • • • • • • • • • • • • • •		•	•
Methylmalonic Aciduria, MMUT-Related Methylmalonic Aciduria, MMAA-Related Mitochondrial Complex I Deficiency, ACAD9-Related Mitochondrial DNA depletion Syndrome 1, TYMP-Related Mitochondrial Trifunctional Protein Deficiency 2 Molybdenum Cofactor Deficiency, Type A Mucolipidosis II/IIIA Mucolipidosis III gamma Mucolipidosis, Type IV Mucopolysaccharidosis, Type IVB Mucopolysaccharidosis, Type IX Mucopolysaccharidosis, Type VI	MMUT MMAA ACAD9 TYMP HADHB MOCS1 GNPTAB GQNPTG MCOLN1 GLB1 HYAL1 ARSB	• • • • • • • • • • • • • • • • • • •		•	•
Methylmalonic Aciduria, MMUT-Related Methylmalonic Aciduria, MMAA-Related Mitochondrial Complex I Deficiency, ACAD9-Related Mitochondrial DNA depletion Syndrome 1, TYMP-Related Mitochondrial Trifunctional Protein Deficiency 2 Molybdenum Cofactor Deficiency, Type A Mucolipidosis II/IIIA Mucolipidosis III gamma Mucolipidosis, Type IV Mucopolysaccharidosis, Type IVB Mucopolysaccharidosis, Type IX Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VII	MMUT MMAA ACAD9 TYMP HADHB MOCS1 GNPTAB GNPTG MCOLN1 GLB1 HYAL1 ARSB GUSB	• • • • • • • • • • • • • • • • • • •		•	•
Methylmalonic Aciduria, MMUT-Related Methylmalonic Aciduria, MMAA-Related Mitochondrial Complex I Deficiency, ACAD9-Related Mitochondrial DNA depletion Syndrome 1, TYMP-Related Mitochondrial Trifunctional Protein Deficiency 2 Molybdenum Cofactor Deficiency, Type A Mucolipidosis II/IIIA Mucolipidosis III gamma Mucolipidosis, Type IV Mucopolysaccharidosis, Type IVB Mucopolysaccharidosis, Type IX Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VII Mulibrey Nanism	MMUT MMAA ACAD9 TYMP HADHB MOCS1 GNPTAB GNPTG MCOLN1 GLB1 HYAL1 ARSB GUSB TRIM37	• • • • • • • • • • • • • • • • • • •		•	• • • • • • • • • • • • • • • • • • •
Methylmalonic Aciduria, MMUT-Related Methylmalonic Aciduria, MMAA-Related Mitochondrial Complex I Deficiency, ACAD9-Related Mitochondrial DNA depletion Syndrome 1, TYMP-Related Mitochondrial Trifunctional Protein Deficiency 2 Molybdenum Cofactor Deficiency, Type A Mucolipidosis II/IIIA Mucolipidosis III gamma Mucolipidosis, Type IV Mucopolysaccharidosis, Type IVB Mucopolysaccharidosis, Type IX Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI	MMUT MMAA ACAD9 TYMP HADHB MOCS1 GNPTAB GNPTG MCOLN1 GLB1 HYAL1 ARSB GUSB	• • • • • • • • • • • • • • • • • • •		•	• • • • • • • • • • • • • • • • • • •
Methylmalonic Aciduria, MMUT-Related Methylmalonic Aciduria, MMAA-Related Mitochondrial Complex I Deficiency, ACAD9-Related Mitochondrial DNA depletion Syndrome 1, TYMP-Related Mitochondrial Trifunctional Protein Deficiency 2 Molybdenum Cofactor Deficiency, Type A Mucolipidosis II/IIIA Mucolipidosis III gamma Mucolipidosis, Type IV Mucopolysaccharidosis, Type IVB Mucopolysaccharidosis, Type IX Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VII Mulibrey Nanism	MMUT MMAA ACAD9 TYMP HADHB MOCS1 GNPTAB GNPTG MCOLN1 GLB1 HYAL1 ARSB GUSB TRIM37	• • • • • • • • • • • • • • • • • • •		•	• • • • • • • • • • • • • • • • • • •
Methylmalonic Aciduria, MMUT-Related Methylmalonic Aciduria, MMAA-Related Mitochondrial Complex I Deficiency, ACAD9-Related Mitochondrial DNA depletion Syndrome 1, TYMP-Related Mitochondrial Trifunctional Protein Deficiency 2 Molybdenum Cofactor Deficiency, Type A Mucolipidosis II/IIIA Mucolipidosis III gamma Mucolipidosis, Type IV Mucopolysaccharidosis, Type IVB Mucopolysaccharidosis, Type IX Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VII Mulibrey Nanism Multiple Pterygium Syndrome	MMUT MMAA ACAD9 TYMP HADHB MOCS1 GNPTAB GNPTG MCOLN1 GLB1 HYAL1 ARSB GUSB TRIM37 CHRNA1	• • • • • • • • • • • • • • • • • • •		•	• • • • • • • • • • • • • • • • • • •
Methylmalonic Aciduria, MMUT-Related Methylmalonic Aciduria, MMAA-Related Mitochondrial Complex I Deficiency, ACAD9-Related Mitochondrial DNA depletion Syndrome 1, TYMP-Related Mitochondrial Trifunctional Protein Deficiency 2 Molybdenum Cofactor Deficiency, Type A Mucolipidosis II/IIIA Mucolipidosis III gamma Mucolipidosis, Type IV Mucopolysaccharidosis, Type IVB Mucopolysaccharidosis, Type IX Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Multiple Pterygium Syndrome Multiple Sulfatase Deficiency Myasthenic Syndrome 13	MMUT MMAA ACAD9 TYMP HADHB MOCS1 GNPTAB GNPTG MCOLN1 GLB1 HYAL1 ARSB GUSB TRIM37 CHRNA1 SUMF1 DPAGT1	• • • • • • • • • • • • • • • • • • •		•	• • • • • • • • • • • • • • • • • • •
Methylmalonic Aciduria, MMUT-Related Methylmalonic Aciduria, MMAA-Related Mitochondrial Complex I Deficiency, ACAD9-Related Mitochondrial DNA depletion Syndrome 1, TYMP-Related Mitochondrial Trifunctional Protein Deficiency 2 Molybdenum Cofactor Deficiency, Type A Mucolipidosis II/IIIA Mucolipidosis III gamma Mucolipidosis, Type IV Mucopolysaccharidosis, Type IVB Mucopolysaccharidosis, Type IX Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VII Mulibrey Nanism Multiple Pterygium Syndrome Multiple Sulfatase Deficiency Myasthenic Syndrome 13 Myasthenic Syndrome 22	MMUT MMAA ACAD9 TYMP HADHB MOCS1 GNPTAB GNPTG MCOLN1 GLB1 HYAL1 ARSB GUSB TRIM37 CHRNA1 SUMF1 DPAGT1 PREPL	• • • • • • • • • • • • • • • • • • •		•	• • • • • • • • • • • • • • • • • • •
Methylmalonic Aciduria, MMUT-Related Methylmalonic Aciduria, MMAA-Related Mitochondrial Complex I Deficiency, ACAD9-Related Mitochondrial DNA depletion Syndrome 1, TYMP-Related Mitochondrial Trifunctional Protein Deficiency 2 Molybdenum Cofactor Deficiency, Type A Mucolipidosis II/IIIA Mucolipidosis III gamma Mucolipidosis, Type IV Mucopolysaccharidosis, Type IVB Mucopolysaccharidosis, Type IX Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mulbirey Nanism Multiple Pterygium Syndrome Multiple Sulfatase Deficiency Myasthenic Syndrome 13 Myasthenic Syndrome 22 Myoclonic Epilepsy of Lafora, Type 2A	MMUT MMAA ACAD9 TYMP HADHB MOCS1 GNPTAB GNPTG MCOLN1 GLB1 HYAL1 ARSB GUSB TRIM37 CCHRNA1 SUMF1 DPAGT1 PREPL EPM2A	• • • • • • • • • • • • • • • • • • •		•	• • • • • • • • • • • • • • • • • • •
Methylmalonic Aciduria, MMUT-Related Methylmalonic Aciduria, MMAA-Related Mitochondrial Complex I Deficiency, ACAD9-Related Mitochondrial DNA depletion Syndrome 1, TYMP-Related Mitochondrial Trifunctional Protein Deficiency 2 Molybdenum Cofactor Deficiency, Type A Mucolipidosis II/IIIA Mucolipidosis III gamma Mucolipidosis, Type IV Mucopolysaccharidosis, Type IVB Mucopolysaccharidosis, Type IX Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mulbibrey Nanism Multiple Pterygium Syndrome Multiple Sulfatase Deficiency Myasthenic Syndrome 13 Myasthenic Syndrome 22 Myoclonic Epilepsy of Lafora, Type 2A Myoclonic Epilepsy of Lafora, Type 2B	MMUT MMAA ACAD9 TYMP HADHB MOCS1 GNPTG MCOLN1 GLB1 HYAL1 ARSB GUSB TRIM37 CHRNA1 SUMF1 DPAGT1 PREPL EPM2A NHLRC1	• • • • • • • • • • • • • • • • • • •		•	• • • • • • • • • • • • • • • • • • •
Methylmalonic Aciduria, MMUT-Related Methylmalonic Aciduria, MMAA-Related Mitochondrial Complex I Deficiency, ACAD9-Related Mitochondrial DNA depletion Syndrome 1, TYMP-Related Mitochondrial Trifunctional Protein Deficiency 2 Molybdenum Cofactor Deficiency, Type A Mucolipidosis II/IIIA Mucolipidosis III gamma Mucolipidosis, Type IV Mucopolysaccharidosis, Type IVB Mucopolysaccharidosis, Type IX Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mulbirey Nanism Multiple Pterygium Syndrome Multiple Sulfatase Deficiency Myasthenic Syndrome 13 Myasthenic Syndrome 22 Myoclonic Epilepsy of Lafora, Type 2B Myoclonic Epilepsy of Unverricht and Lundborg, Type 1A	MMUT MMAA ACAD9 TYMP HADHB MOCS1 GNPTAB GNPTG MCOLN1 GLB1 HYAL1 ARSB GUSB TRIM37 CHRNA1 SUMF1 DPAGT1 PREPL EPM2A NHLRC1 CSTB			•	• • • • • • • • • • • • • • • • • • •
Methylmalonic Aciduria, MMUT-Related Methylmalonic Aciduria, MMAA-Related Mitochondrial Complex I Deficiency, ACAD9-Related Mitochondrial DNA depletion Syndrome 1, TYMP-Related Mitochondrial Trifunctional Protein Deficiency 2 Molybdenum Cofactor Deficiency, Type A Mucolipidosis II/IIIA Mucolipidosis III gamma Mucolipidosis, Type IV Mucopolysaccharidosis, Type IVB Mucopolysaccharidosis, Type IX Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mulbibrey Nanism Multiple Pterygium Syndrome Multiple Sulfatase Deficiency Myasthenic Syndrome 13 Myasthenic Syndrome 22 Myoclonic Epilepsy of Lafora, Type 2A Myoclonic Epilepsy of Lafora, Type 2B	MMUT MMAA ACAD9 TYMP HADHB MOCS1 GNPTAB GNPTG MCOLN1 GLB1 HYAL1 ARSB GUSB TRIM37 CHRNA1 SUMF1 DPAGT1 PREPL EPM2A NHLRC1 CSTB PYGM	• • • • • • • • • • • • • • • • • • •		•	
Methylmalonic Aciduria, MMUT-Related Methylmalonic Aciduria, MMAA-Related Mitochondrial Complex I Deficiency, ACAD9-Related Mitochondrial DNA depletion Syndrome 1, TYMP-Related Mitochondrial Trifunctional Protein Deficiency 2 Molybdenum Cofactor Deficiency, Type A Mucolipidosis II/IIIA Mucolipidosis III gamma Mucolipidosis, Type IV Mucopolysaccharidosis, Type IVB Mucopolysaccharidosis, Type IX Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mulbirey Nanism Multiple Pterygium Syndrome Multiple Sulfatase Deficiency Myasthenic Syndrome 13 Myasthenic Syndrome 22 Myoclonic Epilepsy of Lafora, Type 2B Myoclonic Epilepsy of Unverricht and Lundborg, Type 1A	MMUT MMAA ACAD9 TYMP HADHB MOCS1 GNPTAB GNPTG MCOLN1 GLB1 HYAL1 ARSB GUSB TRIM37 CHRNA1 SUMF1 DPAGT1 PREPL EPM2A NHLRC1 CSTB			•	
Methylmalonic Aciduria, MMUT-Related Methylmalonic Aciduria, MMAA-Related Mitochondrial Complex I Deficiency, ACAD9-Related Mitochondrial DNA depletion Syndrome 1, TYMP-Related Mitochondrial Trifunctional Protein Deficiency 2 Molybdenum Cofactor Deficiency, Type A Mucolipidosis II/IIIA Mucolipidosis III gamma Mucolipidosis, Type IV Mucopolysaccharidosis, Type IV Mucopolysaccharidosis, Type IX Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mulbirey Nanism Multiple Pterygium Syndrome Multiple Sulfatase Deficiency Myasthenic Syndrome 13 Myasthenic Syndrome 22 Myoclonic Epilepsy of Lafora, Type 2B Myoclonic Epilepsy of Unverricht and Lundborg, Type 1A Myophosphorylase Deficiency	MMUT MMAA ACAD9 TYMP HADHB MOCS1 GNPTAB GNPTG MCOLN1 GLB1 HYAL1 ARSB GUSB TRIM37 CHRNA1 SUMF1 DPAGT1 PREPL EPM2A NHLRC1 CSTB PYGM	• • • • • • • • • • • • • • • • • • •		•	• • • • • • • • • • • • • • • • • • •
Methylmalonic Aciduria, MMUT-Related Methylmalonic Aciduria, MMAA-Related Mitochondrial Complex I Deficiency, ACAD9-Related Mitochondrial DNA depletion Syndrome 1, TYMP-Related Mitochondrial Trifunctional Protein Deficiency 2 Molybdenum Cofactor Deficiency, Type A Mucolipidosis II/IIIA Mucolipidosis III gamma Mucolipidosis, Type IV Mucopolysaccharidosis, Type IV Mucopolysaccharidosis, Type IV Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mucopolysaccharidosis, Type VI Mulibrey Nanism Multiple Pterygium Syndrome Multiple Sulfatase Deficiency Myasthenic Syndrome 13 Myasthenic Syndrome 22 Myoclonic Epilepsy of Lafora, Type 2B Myoclonic Epilepsy of Unverricht and Lundborg, Type 1A Myophosphorylase Deficiency N-Acetylglutamate Synthase Deficiency	MMUT MMAA ACAD9 TYMP HADHB MOCS1 GNPTAB GNPTG MCOLN1 GLB1 HYAL1 ARSB GUSB TRIM37 CHRNA1 SUMF1 DPAGT1 PREPL EPM2A NHLRC1 CSTB PYGM NAGS			•	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0



Genetics				1
Neonatal Glycine Encephalopathy	AMT	•		•
Neonatal Glycine Encephalopathy	GCSH	•		•
Neonatal Ichthyosis-Sclerosing Cholangitis	CLDN1	•		•
Nephronophthisis 3	NPHP3	•		•
Nephrotic Syndrome, Type 1	NPHS1	•		
Nephrotic Syndrome, Type 2	NPHS2	-	•	•
		-	_	_
Neuronal ceroid lipofuscinosis, PPT1-Related	PPT1	•	•	•
Neuronal ceroid lipofuscinosis, TPP1-Related	TPP1	•	•	•
Neuronal ceroid-lipofuscinosis, CLN5-Related	CLN5	•	•	•
Neutropenia, Severe congenital 3	HAX1	•		•
Neutropenia, Severe congenital 4	G6PC3	•		•
Niemann-Pick Disease	SMPD1	•	•	•
Niemann-Pick Disease, Type C1	NPC1	•		•
Niemann-pick Disease, Type C2	NPC2	•		•
Nijmegen Breakage Syndrome	NBN	•		
		-		-
Nonaka Myopathy	GNE	•		•
Non-Syndromic Hearing Loss	TMC1	•		•
Non-Syndromic Hearing Loss, GJB2-Related	GJB2	•	•	•
Odontoonychodermal Dysplasia	WNT10A	•		•
Omenn syndrome	RAG2	•		•
Omenn Syndrome	RAG1	•		•
Omenn Syndrome	DCLRE1C	•		•
Osteopetrosis	CA2	•		•
Osteopetrosis, Infantile Malignant	TCIRG1	•	•	•
, , ,			-	
Pendred Syndrome	SLC26A4	•	•	-
Peroxisomal Acyl-CoA Oxidase Deficiency	ACOX1	•		•
Peroxisome Biogenesis Disorder	PEX7	•		•
Perrault Syndrome 1	HSD17B4	•		•
Perrault Syndrome 5	TWNK	•		•
Phenylketonuria	PAH	•	•	•
Pierson Syndrome	LAMB2	•		•
	PROP1	•	_	•
Pituitary Hormone Deficiency 2		-	•	-
Polycystic Kidney Disease 4	PKHD1	•		•
Polyglandular aAutoimmune Syndrome, Type 1	AIRE	•	•	•
Polymicrogyria	ADGRG1	•		•
Polyneuropathy, Hearing Loss, Ataxia, Retinitis Pigmentosa and Cataract, PHARC Disorder	ABHD12	•		•
Pontocerebellar Hypoplasia, Type 1	RARS2	•		•
Pontocerebellar Hypoplasia, Type 2	TSEN54	•		•
Postnatal Progressive Microcephaly	MED17	•		_
		•		•
Primary Ciliary Dyskinesia, DNAH5-Related	DNAH5	•		•
Primary congenital glaucoma	CYP1B1	•	•	•
Progressive Cerebellocerebral Atrophy, Type 1	SEPSECS	•		•
Progressive Cerebellocerebral Atrophy, Type 2	VPS53	•		•
Progressive Familial Intrahepatic Cholestasis, Type 1	ATP8B1	•		•
Progressive Familial Intrahepatic Cholestasis, Type 2	ABCB11	•		•
Propionicacidemia	PCCA	•		•
Propionicacidemia	PCCB			•
				-
Pseudohypoaldosteronism, Type IB	SCNN1B	•		•
Pseudohypoaldosteronism, Type IB1	SCNN1A	•		•
Pseudohypoaldosteronism, Type IB3	SCNN1G	•		•
Pycnodysostosis	CTSK	•		•
Pyridoxamine 5'-Phosphate Oxidase Deficiency	PNPO	•		•
Pyruvate Kinase Deficiency	PKLR	•		•
Renal Hypomagnesemia 5	CLDN19			
		•		•
		-		•
Retinitis Pigmentosa 12	CRB1	•		•
Retinitis Pigmentosa 12 Retinitis Pigmentosa 25	CRB1 EYS	•		•
Retinitis Pigmentosa 12 Retinitis Pigmentosa 25 Retinitis Pigmentosa 26	CRB1 EYS CERKL	•		•
Retinitis Pigmentosa 12 Retinitis Pigmentosa 25	CRB1 EYS	•	•	•
Retinitis Pigmentosa 12 Retinitis Pigmentosa 25 Retinitis Pigmentosa 26	CRB1 EYS CERKL	•	•	•
Retinitis Pigmentosa 12 Retinitis Pigmentosa 25 Retinitis Pigmentosa 26 Retinitis Pigmentosa 28	CRB1 EYS CERKL FAM161A	•	•	•
Retinitis Pigmentosa 12 Retinitis Pigmentosa 25 Retinitis Pigmentosa 26 Retinitis Pigmentosa 28 Retinitis Pigmentosa 59	CRB1 EYS CERKL FAM161A DHDDS	•	•	•
Retinitis Pigmentosa 12 Retinitis Pigmentosa 25 Retinitis Pigmentosa 26 Retinitis Pigmentosa 28 Retinitis Pigmentosa 59 Rhizomelic Chondrodysplasia Punctata, Type 3 Roberts Syndrome	CRB1 EYS CERKL FAM161A DHDDS AGPS ESCO2	•	•	•
Retinitis Pigmentosa 12 Retinitis Pigmentosa 25 Retinitis Pigmentosa 26 Retinitis Pigmentosa 28 Retinitis Pigmentosa 59 Rhizomelic Chondrodysplasia Punctata, Type 3 Roberts Syndrome Salla Disease	CRB1 EYS CERKL FAM161A DHDDS AGPS ESCO2 SLC17A5	•	•	•
Retinitis Pigmentosa 12 Retinitis Pigmentosa 25 Retinitis Pigmentosa 26 Retinitis Pigmentosa 28 Retinitis Pigmentosa 59 Rhizomelic Chondrodysplasia Punctata, Type 3 Roberts Syndrome Salla Disease Sandhoff Disease	CRB1 EYS CERKL FAM161A DHDDS AGPS ESCO2 SLC17A5 HEXB	• • • • • • • • • • • • • • • • • • •	•	• • • • • • • • • • • • • • • • • • •
Retinitis Pigmentosa 12 Retinitis Pigmentosa 25 Retinitis Pigmentosa 26 Retinitis Pigmentosa 28 Retinitis Pigmentosa 28 Retinitis Pigmentosa 59 Rhizomelic Chondrodysplasia Punctata, Type 3 Roberts Syndrome Salla Disease Sandhoff Disease Sanfilippo Syndrome A	CRB1 EYS CERKL FAM161A DHDDS AGPS ESCO2 SLC17A5 HEXB SGSH	• • • • • • • • • • • • • • • • • • •	•	• • • • • • • • • • • • • • • • • • •
Retinitis Pigmentosa 12 Retinitis Pigmentosa 25 Retinitis Pigmentosa 26 Retinitis Pigmentosa 28 Retinitis Pigmentosa 28 Retinitis Pigmentosa 59 Rhizomelic Chondrodysplasia Punctata, Type 3 Roberts Syndrome Salla Disease Sandhoff Disease Sanfilippo Syndrome A Sanfilippo Syndrome B	CRB1 EYS CERKL FAM161A DHDDS AGPS ESCO2 SLC17A5 HEXB SGSH NAGLU	• • • • • • • • • • • • • • • • • • •	•	• • • • • • • • • • • • • • • • • • •
Retinitis Pigmentosa 12 Retinitis Pigmentosa 25 Retinitis Pigmentosa 26 Retinitis Pigmentosa 28 Retinitis Pigmentosa 28 Retinitis Pigmentosa 59 Rhizomelic Chondrodysplasia Punctata, Type 3 Roberts Syndrome Salla Disease Sandhoff Disease Sanfilippo Syndrome A Sanfilippo Syndrome B Sanfilippo Syndrome C	CRB1 EYS CERKL FAM161A DHDDS AGPS ESCO2 SLC17A5 HEXB SGSH NAGLU HGSNAT	• • • • • • • • • • • • • • • • • • •	•	• • • • • • • • • • • • • • • • • • •
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Retinitis Pigmentosa 12 Retinitis Pigmentosa 25 Retinitis Pigmentosa 26 Retinitis Pigmentosa 28 Retinitis Pigmentosa 28 Retinitis Pigmentosa 59 Rhizomelic Chondrodysplasia Punctata, Type 3 Roberts Syndrome Salla Disease Sandhoff Disease Sanfilippo Syndrome A Sanfilippo Syndrome B Sanfilippo Syndrome C	CRB1 EYS CERKL FAM161A DHDDS AGPS ESCO2 SLC17A5 HEXB SGSH NAGLU HGSNAT	• • • • • • • • • • • • • • • • • • •	•	• • • • • • • • • • • • • • • • • • •
Retinitis Pigmentosa 12 Retinitis Pigmentosa 25 Retinitis Pigmentosa 26 Retinitis Pigmentosa 28 Retinitis Pigmentosa 59 Rhizomelic Chondrodysplasia Punctata, Type 3 Roberts Syndrome Salla Disease Sandhoff Disease Sanfilippo Syndrome A Sanfilippo Syndrome B Sanfilippo Syndrome C Schimke Immunoosseous Dysplasia Schneckenbecken Dysplasia	CRB1 EYS CERKL FAM161A DHDDS AGPS ESCO2 SLC17A5 HEXB SGSH NAGLU HGSNAT SMARCAL1 SLC35D1	• • • • • • • • • • • • • • • • • • •	•	• • • • • • • • • • • • • • • • • • •
Retinitis Pigmentosa 12 Retinitis Pigmentosa 25 Retinitis Pigmentosa 26 Retinitis Pigmentosa 28 Retinitis Pigmentosa 59 Rhizomelic Chondrodysplasia Punctata, Type 3 Roberts Syndrome Salla Disease Sandhoff Disease Sandhoff Disease Sanfilippo Syndrome A Sanfilippo Syndrome B Sanfilippo Syndrome C Schimke Immunoosseous Dysplasia Schneckenbecken Dysplasia Schwartz-Jampel Syndrome, Type 1	CRB1 EYS CERKL FAM161A DHDDS AGPS ESCO2 SLC17A5 HEXB SGSH NAGLU HGSNAT SMARCAL1 SLC35D1 HSPG2	• • • • • • • • • • • • • • • • • • •	•	
Retinitis Pigmentosa 12 Retinitis Pigmentosa 25 Retinitis Pigmentosa 26 Retinitis Pigmentosa 28 Retinitis Pigmentosa 59 Rhizomelic Chondrodysplasia Punctata, Type 3 Roberts Syndrome Salla Disease Sandhoff Disease Sandhoff Disease Sanfilippo Syndrome A Sanfilippo Syndrome B Sanfilippo Syndrome C Schimke Immunoosseous Dysplasia Schneckenbecken Dysplasia Schwartz-Jampel Syndrome, Type 1 Seckel Syndrome	CRB1 EYS CERKL FAM161A DHDDS AGPS ESCO2 SLC17A5 HEXB SGSH NAGLU HGSNAT SMARCAL1 SLC35D1 HSPG2 ATR	• • • • • • • • • • • • • • • • • • •	•	• • • • • • • • • • • • • • • • • • •
Retinitis Pigmentosa 12 Retinitis Pigmentosa 25 Retinitis Pigmentosa 26 Retinitis Pigmentosa 28 Retinitis Pigmentosa 28 Retinitis Pigmentosa 59 Rhizomelic Chondrodysplasia Punctata, Type 3 Roberts Syndrome Salla Disease Sandhoff Disease Sandhoff Disease Sanfilippo Syndrome A Sanfilippo Syndrome B Sanfilippo Syndrome C Schimke Immunoosseous Dysplasia Schneckenbecken Dysplasia Schwartz-Jampel Syndrome, Type 1 Seckel Syndrome Senior-Loken Syndrome 4	CRB1 EYS CERKL FAM161A DHDDS AGPS ESCO2 SLC17A5 HEXB SGSH NAGLU HGSNAT SMARCAL1 SLC35D1 HSPG2 ATR NPHP4	• • • • • • • • • • • • • • • • • • •	•	
Retinitis Pigmentosa 12 Retinitis Pigmentosa 25 Retinitis Pigmentosa 26 Retinitis Pigmentosa 28 Retinitis Pigmentosa 28 Retinitis Pigmentosa 59 Rhizomelic Chondrodysplasia Punctata, Type 3 Roberts Syndrome Salla Disease Sandhoff Disease Sanfilippo Syndrome A Sanfilippo Syndrome B Sanfilippo Syndrome C Schimke Immunoosseous Dysplasia Schnexte-Jampel Syndrome, Type 1 Seckel Syndrome Senior-Loken Syndrome 4 Senior-Loken Syndrome 5	CRB1 EYS CERKL FAM161A DHDDS AGPS ESCO2 SLC17A5 HEXB SGSH NAGLU HGSNAT SMARCAL1 SLC35D1 HSPG2 ATR NPHP4 IQCB1	• • • • • • • • • • • • • • • • • • •	•	• • • • • • • • • • • • • • • • • • •
Retinitis Pigmentosa 12 Retinitis Pigmentosa 25 Retinitis Pigmentosa 26 Retinitis Pigmentosa 28 Retinitis Pigmentosa 28 Retinitis Pigmentosa 59 Rhizomelic Chondrodysplasia Punctata, Type 3 Roberts Syndrome Salla Disease Sandhoff Disease Sanfilippo Syndrome A Sanfilippo Syndrome B Sanfilippo Syndrome C Schimke Immunoosseous Dysplasia Schneckenbecken Dysplasia Schwartz-Jampel Syndrome, Type 1 Seckel Syndrome Senior-Loken Syndrome 4 Senior-Loken Syndrome 5 Short-Chain Acyl-CoA Dehydrogenase Deficiency	CRB1 EYS CERKL FAM161A DHDDS AGPS ESCO2 SLC17A5 HEXB SGSH NAGLU HGSNAT SMARCAL1 SLC35D1 HSPG2 ATR NPHP4 IQCB1 ACADS	• • • • • • • • • • • • • • • • • • •	•	• • • • • • • • • • • • • • • • • • •
Retinitis Pigmentosa 12 Retinitis Pigmentosa 25 Retinitis Pigmentosa 26 Retinitis Pigmentosa 28 Retinitis Pigmentosa 28 Retinitis Pigmentosa 59 Rhizomelic Chondrodysplasia Punctata, Type 3 Roberts Syndrome Salla Disease Sandhoff Disease Sanfilippo Syndrome A Sanfilippo Syndrome B Sanfilippo Syndrome C Schimke Immunoosseous Dysplasia Schnexte-Jampel Syndrome, Type 1 Seckel Syndrome Senior-Loken Syndrome 4 Senior-Loken Syndrome 5	CRB1 EYS CERKL FAM161A DHDDS AGPS ESCO2 SLC17A5 HEXB SGSH NAGLU HGSNAT SMARCAL1 SLC35D1 HSPG2 ATR NPHP4 IQCB1	• • • • • • • • • • • • • • • • • • •	•	
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Retinitis Pigmentosa 12 Retinitis Pigmentosa 25 Retinitis Pigmentosa 26 Retinitis Pigmentosa 28 Retinitis Pigmentosa 28 Retinitis Pigmentosa 59 Rhizomelic Chondrodysplasia Punctata, Type 3 Roberts Syndrome Salla Disease Sandhoff Disease Sanfilippo Syndrome A Sanfilippo Syndrome B Sanfilippo Syndrome C Schimke Immunoosseous Dysplasia Schneckenbecken Dysplasia Schneckenbecken Dysplasia Schwartz-Jampel Syndrome, Type 1 Seckel Syndrome Senior-Loken Syndrome 4 Senior-Loken Syndrome 5 Short-Chain Acyl-CoA Dehydrogenase Deficiency Short-Rib Thoracic Dysplasia Shwachman-Diamond Syndrome Sialidosis, Type I	CRB1 EYS CERKL FAM161A DHDDS AGPS ESCO2 SLC17A5 HEXB SGSH NAGLU HGSNAT SMARCAL1 SLC35D1 HSPG2 ATR NPHP4 IQCB1 ACADS TTC21B SBDS NEU1	• • • • • • • • • • • • • • • • • • •	•	
Retinitis Pigmentosa 12 Retinitis Pigmentosa 25 Retinitis Pigmentosa 26 Retinitis Pigmentosa 28 Retinitis Pigmentosa 59 Rhizomelic Chondrodysplasia Punctata, Type 3 Roberts Syndrome Salla Disease Sandhoff Disease Sanfilippo Syndrome A Sanfilippo Syndrome B Sanfilippo Syndrome C Schimke Immunoosseous Dysplasia Schneckenbecken Dysplasia Schneckenbecken Dysplasia Schwartz-Jampel Syndrome, Type 1 Seckel Syndrome Senior-Loken Syndrome 5 Short-Chain Acyl-CoA Dehydrogenase Deficiency Short-Rib Thoracic Dysplasia Shwachman-Diamond Syndrome Sialidosis, Type I Sjogren-Larsson Syndrome	CRB1 EYS CERKL FAM161A DHDDS AGPS ESCO2 SLC17A5 HEXB SGSH NAGLU HGSNAT SMARCAL1 SLC35D1 HSPG2 ATR NPHP4 IQCB1 ACADS TTC21B SBDS NEU1 ALDH3A2	• • • • • • • • • • • • • • • • • • •	•	
Retinitis Pigmentosa 12 Retinitis Pigmentosa 25 Retinitis Pigmentosa 26 Retinitis Pigmentosa 28 Retinitis Pigmentosa 59 Rhizomelic Chondrodysplasia Punctata, Type 3 Roberts Syndrome Salla Disease Sandhoff Disease Sanfilippo Syndrome A Sanfilippo Syndrome B Sanfilippo Syndrome C Schimke Immunoosseous Dysplasia Schneckenbecken Dysplasia Schwartz-Jampel Syndrome, Type 1 Seckel Syndrome Senior-Loken Syndrome 4 Senior-Loken Syndrome 5 Short-Chain Acyl-CoA Dehydrogenase Deficiency Short-Rib Thoracic Dysplasia Shwachman-Diamond Syndrome Sialidosis, Type I Sjogren-Larsson Syndrome Skin Fragility-Woolly Hair Syndrome	CRB1 EYS CERKL FAM161A DHDDS AGPS ESCO2 SLC17A5 HEXB SGSH NAGLU HGSNAT SMARCAL1 SLC35D1 HSPG2 ATR NPHP4 IQCB1 ACADS TTC21B SBDS NEU1 ALDH3A2 DSP	• • • • • • • • • • • • • • • • • • •	•	
Retinitis Pigmentosa 12 Retinitis Pigmentosa 25 Retinitis Pigmentosa 26 Retinitis Pigmentosa 28 Retinitis Pigmentosa 59 Rhizomelic Chondrodysplasia Punctata, Type 3 Roberts Syndrome Salla Disease Sandhoff Disease Sanfilippo Syndrome A Sanfilippo Syndrome B Sanfilippo Syndrome C Schimke Immunoosseous Dysplasia Schneckenbecken Dysplasia Schneckenbecken Dysplasia Schwartz-Jampel Syndrome, Type 1 Seckel Syndrome Senior-Loken Syndrome 5 Short-Chain Acyl-CoA Dehydrogenase Deficiency Short-Rib Thoracic Dysplasia Shwachman-Diamond Syndrome Sialidosis, Type I Sjogren-Larsson Syndrome	CRB1 EYS CERKL FAM161A DHDDS AGPS ESCO2 SLC17A5 HEXB SGSH NAGLU HGSNAT SMARCAL1 SLC35D1 HSPG2 ATR NPHP4 IQCB1 ACADS TTC21B SBDS NEU1 ALDH3A2	• • • • • • • • • • • • • • • • • • •	•	



Spinal Muscular Atrophy	SMN1	•	•	•
Spinal Muscular Atrophy Type 2	SMN2	•		•
Stargardt Disease 1	ABCA4	•		•
Steel Syndrome	COL27A1	•		•
Stuve-Wiedemann Syndrome / Schwartz-Jampel Syndrome, Type 2	LIFR	•		•
Succinate-CoA Ligase Deficiency	SUCLA2	•		•
Sudden infant death with dysgenesis of the testes Syndrome	TSPYL1	•		•
Sulfite Oxidase Deficiency	SUOX	•		•
Tay-Sachs Disease	HEXA	•	•	•
T-cell immunodeficiency, Congenital Alopecia and Nail Dystrophy	FOXN1	•		•
Tetra-Amelia Syndrome 1	WNT3	•		•
Tyrosinemia, Type I	FAH	•	•	•
Usher Syndrome, Type 1	USH1G	•		•
Usher Syndrome, Type 1B	MYO7A	•	•	•
Usher Syndrome, Type 1C	USH1C	•	•	•
Usher Syndrome, Type 1D	CDH23	•	•	•
Usher Syndrome, Type 1F	PCDH15	•	•	•
Usher Syndrome, Type 2A	USH2A	•		•
Usher Syndrome, Type 2C	ADGRV1	•		•
Usher Syndrome, Type 2D	WHRN	•		•
Usher Syndrome, Type 3	CLRN1	•	•	•
Usher Syndrome, Type IJ	CIB2	•		•
Very-long Chain Acyl-CoA Dehydrogenase Deficiency	ACADVL	•	•	•
Vitamin D-dependent Rickets, Type I	CYP27B1	•		•
Walker-Warburg Syndrome	FKTN	•	•	•
Warsaw Breakage Syndrome	DDX11	•		•
Wilson Disease	ATP7B	•	•	•
Wolcott-Rallison Syndrome	EIF2AK3	•		•
Wolman Disease	LIPA	•	•	•
Zellweger spectrum Disorders 1A	PEX1	•		•
Zellweger spectrum Disorders 4A	PEX6	•	•	•
Zellweger spectrum Disorders 5A	PEX2	•		•
Zellweger spectrum Disorders 6A	PEX10	•		•