


Gene and phenotype list: Genes4Life Plus

| # | Phenotype | Gene(s) |
|---|---|---|
| Syndromes with intellectual disability | | |
| Multiple congenital abnormalities with intellectual disability | | |
| 1 | Achalasia-addisonianism-alacrimia syndrome | AAAS |
| 2 | Al Kaissi syndrome | CDK10 |
| 3 | Athabaskan brainstem dysgenesis syndrome | HOXA1 |
| 4 | Arthrogyposis, intellectual disability, and seizure disorder | SLC35A3 |
| 5 | 3MC syndrome | COLEC11, MASP1 |
| 6 | Bardet-Biedl syndrome | ARL6, BBS1, BBS10, BBS12, BBS2, BBS4, BBS5, BBS7, BBS9, LZTFL1, MKKS, MKS1, SDCCAG8, TTC8 |
| 7 | Basel-Vanagait-Smirin-Yosef syndrome | MED25 |
| 8 | Behr syndrome | OPA1 |
| 9 | Boucher-Neuhauser syndrome | PNPLA6 |
| 10 | Bosley-Salih-Alorainy syndrome | HOXA1 |
| 11 | Brunner syndrome | MAOA |
| 12 | Goldberg-Shprintzen megacolon syndrome | KIFBP |
| 13 | Borjeson-Forsman-Lehmann syndrome | PHF6 |
| 14 | Bloom syndrome | BLM |
| 15 | Partington syndrome | ARX |
| 16 | Pitt-Hopkins-like syndrome | CNTNAP2 |
| 17 | Polyhydramnios, megalencephaly, and symptomatic epilepsy | STRADA |
| 18 | PERCHING syndrome | KLHL7 |
| 19 | Shaheen syndrome | COG6 |
| 20 | Growth retardation, intellectual developmental disorder, hypotonia, and hepatopathy | IARS1 |
| 21 | Cataracts, growth hormone deficiency, sensory neuropathy, sensorineural hearing loss, and skeletal dysplasia (CAGSSS) | IARS2 |
| 22 | Carey-Fineman-Ziter syndrome | MYMK |
| 23 | Cerebellofaciodental syndrome | BRF1 |
| 24 | Craniofacial dysmorphism, skeletal anomalies, and intellectual disability syndrome | TMCO1 |
| 25 | CHIME syndrome | PIGL |
| 26 | COACH syndrome | CC2D2A, RPGRIP1L, TMEM67 |
| 27 | Cockayne syndrome | ERCC4, ERCC5, ERCC6, ERCC8 |
| 28 | Cohen syndrome | VPS13B |
| 29 | Cerebrooculofacioskeletal syndrome (COFS) | ERCC2, ERCC6 |
| 30 | Coffin-Lowry syndrome | RPS6KA3 |
| 31 | Cowchock syndrome | AIFM1 |
| 32 | De Sanctis-Cacchione syndrome | ERCC6 |

Version 2.0 -updated 08.03.2023

| | | |
|----|---|-----------------------------|
| 33 | Developmental delay with short stature, dysmorphic features, and sparse hair | DPH1 |
| 34 | Donnai-Barrow syndrome | LRP2 |
| 35 | DOOR syndrome | TBC1D24 |
| 36 | XFE progeroid syndrome | ERCC4 |
| 37 | Desmosterolosis | DHCR24 |
| 38 | Dyggve-Melchior-Clausen disease | DYM |
| 39 | Elsahy-Waters syndrome | CDH11 |
| 40 | Fragile X syndrome | FMR1 |
| 41 | Frontometaphyseal dysplasia | FLNA |
| 42 | Galloway-Mowat syndrome | WDR73, OSGEP |
| 43 | Gillespie syndrome | ITPR1 |
| 44 | GrisCELLI syndrome | RAB27A |
| 45 | HSAN2D syndrome | SCN9A |
| 46 | Hypoparathyroidism-retardation-dysmorphism syndrome | TBCE |
| 47 | Hypotonia, infantile, with psychomotor retardation and characteristic facies | TBCK, UNC80, NALCN |
| 48 | Jawad syndrome | RBBP8 |
| 49 | Jensen syndrome | TIMM8A |
| 50 | Johanson-Blizzard syndrome | UBR1 |
| 51 | IFAP syndrome with or without BRESHECK syndrome | MBTPS2 |
| 52 | Immunoskeletal dysplasia with neurodevelopmental abnormalities | EXTL3 |
| 53 | Infantile liver failure syndrome | LARS1 |
| 54 | Intellectual developmental disorder with dysmorphic facies, seizures, and distal limb anomalies | OTUD6B |
| 55 | Intellectual developmental disorder with cardiac arrhythmia | GNB5 |
| 56 | Lujan-Fryns syndrome | MED12 |
| 57 | Kohlschütter-tonz syndrome | ROGDI |
| 58 | Ohdo syndrome | MED12 |
| 59 | Opitz-Kaveggia syndrome | MED12 |
| 60 | Opitz GBBB syndrome | MID1 |
| 61 | Oliver-McFarlane syndrome | PNPLA6 |
| 62 | Mosaic variegated aneuploidy syndrome | BUB1B |
| 63 | MEHMO syndrome | EIF2S3 |
| 64 | Muscular dystrophy, congenital, with cataracts and intellectual disability | INPP5K |
| 65 | Nijmegen breakage syndrome | NBN, RAD50 |
| 66 | Nance-Horan syndrome | NHS |
| 67 | Neurodevelopmental disorder with brain anomalies and additional features | PLAA, PRUNE1, VARS1, WDR45B |
| 68 | Multiple congenital anomalies-hypotonia-seizures syndrome | PIGA, PIGN, PIGT |
| 69 | Renpenning syndrome | PQBP1 |
| 70 | Salt and pepper developmental regression syndrome | ST3GAL5 |
| 71 | Seckel syndrome | ATR, CENPJ, CEP152, RBBP8 |

Version 2.0 -updated 08.03.2023

| | | |
|---|--|---|
| 72 | SESAME syndrome | KCNJ10 |
| 73 | Smith-Lemli-Opitz syndrome | DHCR7 |
| 74 | Spastic paraplegia and psychomotor retardation with or without seizures | HACE1 |
| 75 | LIG4 syndrome | LIG4 |
| 76 | Wieacker-Wolff syndrome | ZC4H2 |
| 77 | Alacrima, achalasia, and intellectual disability syndrome | GMPPA |
| 78 | Chudley-McCullough syndrome | GPSM2 |
| 79 | Growth retardation, developmental delay, coarse facies, and early death | FTO |
| 80 | Martsof syndrome | RAB3GAP2 |
| 81 | Pierson syndrome | LAMB2 |
| 82 | Hemorrhagic destruction of the brain with subependymal calcification and cataracts | JAM3 |
| 83 | Hennekam lymphangiectasia-lymphedema syndrome | CCBE1, FAT4 |
| 84 | Perlman syndrome | DIS3L2 |
| 85 | Temtamy preaxial brachydactyly syndrome | CHSY1 |
| 86 | Filippi syndrome | CKAP2L |
| 87 | Fraser syndrome | FRAS1, FREM2 |
| 88 | Orofaciodigital syndrome | CPLANE1, C2CD3, DDX59, SERPINH1, TMEM107, TCTN3 |
| 89 | Roberts syndrome | ESCO2 |
| 90 | SC phocomelia syndrome | ESCO2 |
| 91 | Warburg micro syndrome | RAB18, RAB3GAP1, RAB3GAP2 |
| 92 | Woodhouse-Sakati syndrome | DCAF17 |
| 93 | Van Maldergem syndrome | DCHS1, FAT4 |
| 94 | Warsaw breakage syndrome | DDX11 |
| 95 | You-Hoover-Fong syndrome | TELO2 |
| Syndromic microcephaly | | |
| 96 | Microcephaly, epilepsy, and diabetes syndrome | IER3IP1 |
| 97 | Microcephaly, progressive, seizures, and cerebral and cerebellar atrophy | QARS1 |
| 98 | Microcephaly-capillary malformation syndrome | STAMPB |
| 99 | Microcephaly, short stature, and impaired glucose metabolism | TRMT10A |
| 100 | Microcephaly, short-stature and endocrine dysfunction | XRCC4 |
| 101 | Microcephaly, short stature, and limb abnormalities | DONSON |
| 102 | Microcephaly and chorioretinopathy | TUBGCP4, TUBGCP6 |
| 103 | Microcephaly, seizures, spasticity, and brain calcification | PCDH12 |
| X-linked syndromic intellectual disability | | |
| 104 | Turner type | HUWE1 |
| 105 | Claes-Jensen type | KDM5C |
| 106 | Christianson type | SLC9A6 |
| 107 | Siderius type | PHF8 |
| 108 | Type 14 | UPF3B |

| | | |
|---|--|---|
| 109 | CK syndrome | NSDHL |
| 110 | Snyder-Robinson type | SMS |
| 111 | Nascimento type | UBE2A |
| 112 | Raymond type | ZDHC9 |
| 113 | Intellectual disability, truncal obesity, retinal dystrophy, and micropenis | INPP5E |
| 114 | Intellectual disability, X-linked, with cerebellar hypoplasia and distinctive facial appearance | OPHN1 |
| Syndromic brain malformations | | |
| 115 | MASA syndrome | L1CAM |
| 116 | CRASH syndrome | L1CAM |
| 117 | Agenesis of the corpus callosum with peripheral neuropathy (Andermann syndrome) | SLC12A6 |
| 118 | Acrocallosal syndrome | KIF7 |
| 119 | Proud syndrome | ARX |
| 120 | Temtamy syndrome | C12orf57 |
| 121 | Cerebroretinal microangiopathy with calcifications and cysts | CTC1 |
| 122 | Vici syndrome | EPG5 |
| 123 | Proliferative vasculopathy and hydraencephaly-hydrocephaly syndrome | FLVCR2 |
| 124 | Neurodevelopmental disorder and structural brain anomalies with or without seizures and spasticity | PTPN23 *Not screened in WA, QLD and SA |
| Syndromic skin conditions with intellectual disability | | |
| 125 | Cerebral dysgenesis, neuropathy, ichthyosis, and palmoplantar keratoderma syndrome | SNAP29 |
| 126 | Adams-Oliver syndrome | DOCK6, EOGT |
| Syndromic vision conditions with intellectual disability | | |
| 127 | Peter's plus syndrome | B3GLCT |
| 128 | Congenital cataracts, hearing loss, and neurodegeneration | SLC33A1 |
| 129 | Knobloch syndrome | COL18A1 |
| 130 | Lowe syndrome | OCRL |
| 131 | Kaufman oculocerebrofacial syndrome | UBE3B |
| 132 | Kahrizi syndrome | SRD5A3 |
| 133 | Optic atrophy with or without ataxia, intellectual disability, and seizures | RTN4IP1 |
| 134 | Norrie disease | NDP |
| Syndromic growth conditions with intellectual disability | | |
| 135 | Simpson-Golabi-Behmel syndrome | OFD1, GPC3 |
| Severe, lethal, neonatal syndromes | | |
| 136 | Meckel syndrome | CC2D2A, CEP290, MKS1, NPHP3, RPGRIP1L, TMEM216, TMEM231, TMEM67 |
| 137 | Alkuraya-Kucinskas syndrome | KIAA1109 |
| 138 | Bowen-Conradi syndrome | EMG1 |
| 139 | Fetal akinesia deformation sequence | RAPSN |
| 140 | Lethal congenital contracture syndrome | CNTNAP1, GLE1, GLDN |
| 141 | Ventriculomegaly with cystic kidney disease | CRB2 |

Version 2.0 -updated 08.03.2023

| | | |
|--|---|--|
| 142 | Hydrolethalmus syndrome | HYLS1, KIF7 |
| 143 | TARP syndrome | RBM10 |
| 144 | Rigidity and multifocal seizure syndrome, lethal neonatal | BRAT1 |
| Syndromes without intellectual disability | | |
| Multiple pterygium syndrome | | |
| 145 | Lethal type | CHRNA1, RIPK4 |
| 146 | Escobar syndrome | CHRNA1 |
| Multiple congenital abnormalities | | |
| 147 | Burn-McKeown syndrome | TXNL4A |
| 148 | Bifid nose with or without anorectal and renal anomalies | FREM1 |
| 149 | Crisponi syndrome | CRLF1, CLCF1 |
| 150 | McKusick-Kaufman syndrome | MKKS |
| 151 | Shwachman-Diamond syndrome | SBDS |
| 152 | Split-hand foot malformation | WNT10B |
| 153 | Werner syndrome | WRN |
| 154 | VACTERL association X-linked | ZIC3 |
| 155 | Lipodystrophy, congenital generalized | BSCL2, CAVIN1 |
| 156 | Wolfram syndrome | CISD2, WFS1 |
| 157 | Urofacial syndrome | HPSE2, LRIG2 |
| Syndromic skin and skeletal conditions | | |
| 158 | Rothmund-Thomson syndrome | RECQL4 |
| 159 | Alstrom syndrome | ALMS1 |
| 160 | GAPO syndrome | ANTXR1 |
| 161 | HELIX syndrome | CLDN10 |
| 162 | Haim-Munk syndrome | CTSC |
| 163 | Laryngoonychocutaneous syndrome | LAMA3 |
| 164 | Miller syndrome | DHODH |
| 165 | Macrocephaly, alopecia, cutis laxa, and scoliosis | RIN2 |
| 166 | Mandibuloacral dysplasia with type B lipodystrophy | ZMPSTE24 |
| 167 | Dyskeratosis congenita | DKC1, RTEL1, WRAP53 |
| 168 | Papillon-Lefevre syndrome | CTSC |
| 169 | Spondyloocular syndrome | XYLT2 |
| 170 | Treacher-Collins syndrome | POLR1C |
| 171 | Schimke immunoosseous dysplasia | SMARCA1 |
| Syndromic vision and hearing conditions | | |
| 172 | Usher syndrome | ADGRV1, CDH23, CLRN1, MYO7A, PCDH15, USH1C, USH1G, USH2A, WHRN |
| 173 | Retinitis pigmentosa with skeletal anomalies | CWC27 |
| 174 | Jalili syndrome | CNNM4 |
| Syndromic vision and renal conditions | | |
| 175 | Senior-Loken syndrome | CEP290, NPHP1, NPHP4, SDCCAG8, IQCB1, WDR19 |
| Mitochondrial conditions | | |

| Conditions affecting multiple body systems | | |
|--|--|--|
| 176 | Combined oxidative phosphorylation deficiency | AARS2, C12orf65, CARS2, FARS2, ELAC2, GFM1, GTPBP3, MTFMT, MTO1, NARS2, RMND1, TSFM, TUFM, VARS2, TRIT1, EARS2 |
| Leigh and Leigh-like syndrome | | |
| 177 | Mitochondrial complex I deficiency | ACAD9, FOXRED1, NUBPL, NDUFA1, NDUFAF2, NDUFAF5, NDUFAF6, NDUFA10, NDUFA11, NDUFS6, NDUFS4, NDUFS2, NDUFS7, NDUFS8, NDUFS1, NDUFV1, NDUFV2 |
| 178 | Leigh syndrome due to cytochrome c oxidase deficiency | COX15 |
| 179 | Leigh syndrome, French Canadian type | LRPPRC |
| Other mitochondrial conditions | | |
| 180 | Mitochondrial complex II deficiency | SDHAF1 |
| 181 | Mitochondrial complex III deficiency | BCS1L, LYRM7, TTC19, UQCRCQ |
| 182 | Mitochondrial complex IV deficiency | COX10, COA8, COX20, SURF1, PET100 |
| 183 | Mitochondrial complex V deficiency | TMEM70 |
| 184 | Mitochondrial DNA depletion syndrome | DGUOK, FBXL4, MGME1, MPV17, RRM2B, SUCLA2, SUCLG1, TK2, TWNK, TYMP |
| 185 | Mitochondrial recessive ataxia syndrome (includes SANDO and SCAE) | TWNK |
| 186 | Multiple mitochondrial dysfunctions syndrome | BOLA3, IBA57, ISCA2, NDU1 |
| 187 | Cardioencephalomyopathy, fatal infantile, due to cytochrome c oxidase deficiency 2 | COX15, SCO2 |
| 188 | Sideroblastic anaemia with B-cell immunodeficiency, periodic fevers, and developmental delay | TRNT1 |
| 189 | Leukoencephalopathy with brain stem and spinal cord involvement and lactate elevation | DARS2 |
| 190 | Hyperuricemia, pulmonary hypertension, renal failure, and alkalosis (HUPRA syndrome) | SARS2 |
| 191 | HSD10 disease | HSD17B10 |
| 192 | Mohr-Tranebjaerg syndrome | TIMM8A |
| 193 | Mitochondrial neurodevelopmental disorder, with abnormal movements and lactic acidosis | WARS2 |
| 194 | Myopathy, lactic acidosis, and sideroblastic anaemia | PUS1, LARS2, YARS2 |
| 195 | Myopathy, mitochondrial, and ataxia | MSTO1 *Not screened in WA, QLD and SA |
| 196 | Mitochondrial short-chain enoyl-CoA hydratase 1 deficiency | ECHS1 |
| Lysosomal storage disorders | | |
| Mannosidosis | | |
| 197 | Alpha | MAN2B1 |
| 198 | Beta | MANBA |
| Mucopolysaccharidosis | | |
| 199 | Mucopolysaccharidosis | GALNS, GNS, GUSB, IDS, IDUA |
| 200 | Type VI (Maroteaux-Lamy) | ARSB |
| 201 | Type IVB (Morquio) | GLB1 |
| 202 | Type IIIA (Sanfilippo A) | SGSH |
| 203 | Type IIIB (Sanfilippo B) | NAGLU |
| 204 | Type IIIC (Sanfilippo C) | HGSNAT |
| Cystinosis | | |

| | | |
|--|--|---|
| 205 | Atypical nephropathic | CTNS |
| 206 | Nephropathic | CTNS |
| 207 | Late-onset juvenile or adolescent nephropathic | CTNS |
| 208 | Ocular non-nephropathic | CTNS |
| Other lysosomal storage disorders | | |
| 209 | Galactosialidosis | CTSA |
| 210 | Yunis-Varon syndrome | FIG4 |
| 211 | Fucosidosis | FUCA1 |
| 212 | Farber lipogranulomatosis | ASAH1 |
| 213 | Glycogen storage disease (Pompe) | GAA |
| 214 | Geleophysic dysplasia | ADAMTSL2 |
| 215 | Krabbe disease | GALC, PSAP |
| 216 | Fabry disease | GLA |
| 217 | GM1-gangliosidosis | GLB1 |
| 218 | GM2-gangliosidosis | HEXA, GM2A |
| 219 | Metachromatic leukodystrophy | ARSA, PSAP |
| 220 | Mucopolipidosis | GNPTAB, GNPTG, MCOLN1 |
| 221 | Polyglucosan body myopathy 1 with or without immunodeficiency | RBCK1 |
| 222 | Tay-Sachs disease | HEXA |
| 223 | Sandhoff disease | HEXB |
| 224 | Chediak-Higashi syndrome | LYST |
| 225 | Aspartylglucosaminuria | AGA |
| 226 | Schindler disease | NAGA |
| 227 | Sialidosis | NEU1 |
| 228 | Combined SAP deficiency | PSAP |
| 229 | Marinesco-Sjogren syndrome | SIL1 |
| 230 | Sialic acid storage disorder | SLC17A5 |
| 231 | Niemann-Pick disease | NPC1, NPC2, SMPD1 |
| Metabolic conditions | | |
| Peroxisome biogenesis disorders | | |
| 232 | Including Zellweger syndrome, neonatal adrenoleukodystrophy and infantile Refsum disease | PEX1, PEX10, PEX11B, PEX12, PEX13, PEX16, PEX2, PEX26, PEX3, PEX5, PEX6, PEX7 |
| Organic acidemias | | |
| 233 | Argininosuccinic aciduria | ASL |
| 234 | 3-methylglutaconic aciduria | AUH, CLPB, DNAJC19, HTRA2, OPA3, SERAC1 |
| 235 | D-2-hydroxyglutaric aciduria | D2HGDH |
| 236 | Glutaricaciduria | GCDH |
| 237 | D-glyceric aciduria | GLYCTK |
| 238 | L-2-hydroxyglutaric aciduria | L2HGDH |
| 239 | Methylmalonic aciduria | MMADHC, MMUT |
| 240 | Methylmalonic aciduria and homocystinuria | LMBRD1, MMACHC, MMADHC |
| 241 | Alpha-methylacetoacetic aciduria | ACAT1 |

| | | |
|--|---|---|
| 242 | Methylmalonic aciduria, vitamin B12-responsive | MMAA, MMAB |
| 243 | Mevalonic aciduria | MVK |
| 244 | Combined D-2- and L-2-hydroxyglutaric aciduria | SLC25A1 |
| 245 | Isovaleric acidemia | IVD |
| 246 | Glutaric acidemia | ETFA, ETFB, ETFDH |
| Other metabolic conditions | | |
| 247 | Adenylosuccinase deficiency | ADSL |
| 248 | Arts syndrome | PRPS1 |
| 249 | Chanarin-Dorfman syndrome | ABHD5 |
| 250 | Galactosemia | GALT* |
| *Not screened in WA, QLD and SA | | |
| 251 | Glycogen storage disease | AGL, G6PC, GYS2, GBE1, LDHA, PFKM, SLC37A4 |
| 252 | GABA-transaminase deficiency | ABAT |
| 253 | Fanconi-Bickel syndrome | SLC2A2 |
| 254 | Hyperinsulinemic hypoglycemia | ABCC8, HADH, KCNJ11 |
| 255 | Hyperoxaluria | AGXT |
| 256 | Hypermanganesemia with dystonia | SLC39A14 |
| 257 | Succinic semialdehyde dehydrogenase deficiency | ALDH5A1 |
| 258 | Fructose intolerance | ALDOB |
| 259 | Congenital disorders of glycosylation | ALG1, ALG11, ALG12, ALG3, ALG6, ALG8, ALG9, CCDC115, COG6, COG7, DOLK, DPAGT1, MGAT2, MPI, PGM1, PMM2, RFT1, SLC39A8, SSR4, SRD5A3, TMEM165 |
| 260 | Congenital disorder of deglycosylation | NGLY1 |
| 261 | Glycine encephalopathy | AMT, GLDC |
| 262 | Glycosylphosphatidylinositol biosynthesis defect | GPA1 |
| 263 | Argininemia | ARG1 |
| 264 | Asparagine synthetase deficiency | ASNS |
| 265 | Canavan disease | ASPA |
| 266 | Citrullinemia | ASS1, SLC25A13 |
| 267 | Chylomicron retention disease | SAR1B |
| 268 | Menkes disease and occipital horn syndrome | ATP7A |
| 269 | Maple syrup urine disease | BCKDHA, BCKDHB, DBT |
| 270 | Branched-chain ketoacid dehydrogenase kinase deficiency | BCKDK |
| 271 | GRACILE syndrome | BCS1L |
| 272 | Homocystinuria | MMADHC, MTHFR, MTR, MTRR |
| 273 | Lysinuric protein intolerance | SLC7A7 |
| 274 | Proteinuria | CLCN5 |
| 275 | Prolidase deficiency | PEPD |
| 276 | Hypomagnesemia | CLDN19, SLC30A10, TRPM6 |
| 277 | Coenzyme Q10 deficiency | COQ2, COQ4, COQ6, COQ8A |
| 278 | Carbamoylphosphate synthetase I deficiency | CPS1 |
| 279 | CPT 2 deficiency | CPT1A, CPT2 |

| | | |
|-----|---|---------------------------------------|
| 280 | Methemoglobinemia | CYB5R3 |
| 281 | Metabolic encephalomyopathic crises, recurrent, with rhabdomyolysis, cardiac arrhythmias, and neurodegeneration | TANGO2 |
| 282 | Lipid storage myopathy due to flavin adenine dinucleotide synthetase deficiency | FLAD1 |
| 283 | Medium-chain acyl-CoA dehydrogenase (MCAD) deficiency | ACADM *Not screened in WA, QLD and SA |
| 284 | Peroxisomal acyl-CoA oxidase deficiency | ACOX1 |
| 285 | 17-alpha-hydroxylase deficiency | CYP17A1 |
| 286 | 17,20-lyase deficiency | CYP17A1 |
| 287 | Cerebrotendinous xanthomatosis | CYP27A1 |
| 288 | Aromatic L-amino acid decarboxylase deficiency | DDC |
| 289 | Dihydrolipoamide dehydrogenase deficiency | DLD |
| 290 | Wolcott-Rallison syndrome | EIF2AK3 |
| 291 | Hypophosphatemic rickets | ENPP1 |
| 292 | Hyperphosphatasia with intellectual disability syndrome | PIGV, PIGO, PGAP2, PGAP3 |
| 293 | Ethylmalonic encephalopathy | ETHE1 |
| 294 | Tyrosinemia | FAH, HPD |
| 295 | Fructose-1,6-bisphosphatase deficiency | FBP1 |
| 296 | Fumarase deficiency | FH |
| 297 | Glutamate formiminotransferase deficiency | FTCD |
| 298 | Cerebral creatine deficiency syndrome | GAMT, GATM, SLC6A8 |
| 299 | Gaucher disease | GBA, PSAP |
| 300 | Glycerol kinase deficiency | GK |
| 301 | Molybdenum cofactor deficiency | GPHN, MOCS1, MOCS2 |
| 302 | Glutathione synthetase deficiency | GSS |
| 303 | 3-hydroxyacyl-CoA dehydrogenase deficiency | HADH |
| 304 | LCHAD deficiency | HADHA |
| 305 | Trifunctional protein deficiency | HADHA, HADHB |
| 306 | Hemochromatosis | HAMP, HJV |
| 307 | 3-hydroxyisobutryl-CoA hydrolase deficiency | HIBCH |
| 308 | Holocarboxylase synthetase deficiency | HLCS |
| 309 | HMG-CoA lyase deficiency | HMGCL |
| 310 | HMG-CoA synthase-2 deficiency | HMGCS2 |
| 311 | Lesch-Nyhan syndrome | HPRT1 |
| 312 | D-bifunctional protein deficiency | HSD17B4 |
| 313 | Leprechaunism | INSR |
| 314 | Norum disease | LCAT |
| 315 | Lactate dehydrogenase-B deficiency | LDHB |
| 316 | Familial hypercholesterolemia | LDLR, LDLRAP1 |
| 317 | Pyruvate dehydrogenase lipoic acid synthetase deficiency | LIAS |
| 318 | Cholesteryl ester storage disease | LIPA |
| 319 | Wolman disease | LIPA |

| | | |
|-----|---|----------------------------------|
| 320 | Lipoyltransferase 1 deficiency | LIPT1 |
| 321 | Lipoprotein lipase deficiency | LPL |
| 322 | Malonyl-CoA decarboxylase deficiency | MLYCD |
| 323 | Abetalipoproteinemia | MTTP |
| 324 | N-acetylglutamate synthase deficiency | NAGS |
| 325 | N-terminal acetyltransferase deficiency | NAA10 |
| 326 | Ornithine transcarbamylase deficiency | OTC |
| 327 | Phenylketonuria (PKU) | PAH |
| 328 | Pyruvate carboxylase deficiency | PC |
| 329 | Hyperphenylalaninemia | PTS, QDPR, DNAJC12 |
| 330 | Propionicacidemia | PCCA, PCCB |
| 331 | Proprotein convertase 1 deficiency | PCSK1 |
| 332 | Pyruvate dehydrogenase deficiency | PDHA1, PDHB, PDP1 |
| 333 | Phosphoglycerate kinase 1 deficiency | PGK1 |
| 334 | Phosphoglycerate dehydrogenase deficiency | PHGDH |
| 335 | Refsum disease | PHYH |
| 336 | Pyruvate kinase deficiency | PKLR |
| 337 | Plasminogen deficiency | PLG |
| 338 | Dysplasminogenemia | PLG |
| 339 | Pyridoxamine 5'-phosphate oxidase deficiency | PNPO |
| 340 | Phosphoribosylpyrophosphate synthetase superactivity | PRPS1 |
| 341 | Phosphoserine phosphatase deficiency | PSPH |
| 342 | Neu-Laxova syndrome | PHGDH, PSAT1 |
| 343 | Riboflavin transport deficiency syndrome | SLC52A2, SLC52A3 |
| 344 | Tumoral calcinosis, normophosphatemic | SAMD9 |
| 345 | Lathosterolosis | SC5D |
| 346 | Emphysema-cirrhosis, due to AAT deficiency | SERPINA1 |
| 347 | Hemorrhagic diathesis due to antithrombin Pittsburgh | SERPINA1 |
| 348 | Monocarboxylate transporter 1 deficiency | SLC16A1 |
| 349 | Thiamine metabolism dysfunction syndrome | SLC19A2, SLC19A3, SLC25A19, TPK1 |
| 350 | Carnitine deficiency | SLC22A5 |
| 351 | Hyperornithinemia-hyperammonemia-homocitrullinemia syndrome | SLC25A15 |
| 352 | Acrodermatitis enteropathica | SLC39A4 |
| 353 | Multiple sulfatase deficiency | SUMF1 |
| 354 | Salla disease | SLC17A5 |
| 355 | Sjogren-Larsson syndrome | ALDH3A2 |
| 356 | Sulfite oxidase deficiency | SUOX |
| 357 | Transaldolase deficiency | TALDO1 |
| 358 | Barth syndrome | TAZ |
| 359 | Adrenocorticotrophic hormone deficiency | TBX19 |
| 360 | Transcobalamin II deficiency | TCN2 |

| | | |
|--|---|--|
| 361 | Hemolytic anaemia due to triosephosphate isomerase deficiency | TPI1 |
| 362 | Crigler-Najjar syndrome | UGT1A1 |
| 363 | Orotic aciduria | UMPS |
| 364 | VLCAD deficiency | ACADVL |
| 365 | Wilson disease | ATP7B |
| Endocrine conditions | | |
| Congenital adrenal hyperplasia* | | |
| 366 | Severe salt wasting type | CYP11A1, CYP11B2, NR0B1, POU1F1, PROP1, HSD3B2 |
| 367 | Lipoid type | STAR |
| | <i>*Excludes 21-hydroxylase deficiency, as the CYP21A2 gene is not screened for technical reasons</i> | |
| Diabetes mellitus | | |
| 368 | Neonatal, with congenital hypothyroidism | GLIS3 |
| 369 | Insulin-resistant, with acanthosis nigricans | INSR |
| Other endocrine conditions | | |
| 370 | Disordered steroidogenesis due to cytochrome P450 oxidoreductase | POR |
| 371 | Glucocorticoid deficiency | MC2R, MRAP, NNT |
| 372 | Growth hormone deficiency with pituitary anomalies | HESX1 |
| 373 | Hyperparathyroidism, neonatal severe | CASR |
| 374 | Hypothyroidism, congenital | TSHB |
| 375 | Insulin-like growth factor resistance | IGF1R |
| 376 | Laron syndrome | GHR |
| 377 | Obesity, morbid, due to leptin deficiency | LEP |
| 378 | Pituitary hormone deficiency | HESX1, LHX3 |
| 379 | Proopiomelanocortin (POMC) deficiency | POMC |
| 380 | Rabson-Mendenhall syndrome | INSR |
| Neurological conditions | | |
| White matter disorders | | |
| 381 | Adrenoleukodystrophy | ABCD1 |
| 382 | Aicardi-Goutieres syndrome | ADAR, RNASEH2A, RNASEH2B, RNASEH2C, SAMHD1, TREX1 |
| 383 | Leukodystrophy, hypomyelinating | AIMP1, FAM126A, GJC2, HSPD1, POLR3A, POLR3B, PYCR2, RARS1, UFM1, VPS11 |
| 384 | Leukoencephalopathy with ataxia | CLCN2 |
| 385 | Leukoencephalopathy with vanishing white matter | EIF2B1, EIF2B2, EIF2B3, EIF2B4, EIF2B5 |
| 386 | Leukoencephalopathy, cystic, without megalencephaly | RNASSET2 |
| 387 | Megalencephalic leukoencephalopathy with subcortical cysts | HEPACAM, MLC1 |
| 388 | Hypomyelination with brainstem and spinal cord involvement and leg spasticity (HBSL) | DARS1 |
| 389 | Pelizaeus-Merzbacher disease | PLP1 |
| Congenital brain malformations | | |
| 390 | Pontocerebellar hypoplasia | AMPD2, CLP1, EXOSC3, EXOSC8, RARS2, SEPSECS, TBC1D23, TOE1, TSEN2, TSEN54, VPS53, VRK1 |
| 391 | Lissencephaly | ARX, KATNB1, LAMB1, NDE1, DCX, TMTC3 |

| | | |
|-------------------------------------|--|--|
| 392 | Joubert syndrome | AHI1, ARL13B, CC2D2A, CEP290, CEP41, CPLANE1, CSPP1, INPP5E, KIF7, NPHP1, OFD1, RPGRIP1L, TCTN2, TCTN3, TMEM138, TMEM216, TMEM231, TMEM237, TMEM67 |
| 393 | Polymicrogyria | ADGRG1, RTTN |
| 394 | Septooptic dysplasia | HESX1 |
| 395 | Band heterotopia | DCX, EML1 |
| 396 | Band-like calcification with simplified gyration and polymicrogyria | OCLN |
| 397 | Cerebellar hypoplasia and intellectual disability with or without quadrupedal locomotion | VLDLR |
| 398 | Periventricular heterotopia with microcephaly | ARFGF2 |
| 399 | Poretti-Boltshauser syndrome | LAMA1 |
| 400 | Cortical malformations, occipital | LAMC3 |
| Microcephaly | | |
| 401 | Isolated | ASPM, CDK5RAP2, CENPJ, CEP152, CIT, KIF14, KNL1, MCPH1, MFSD2A, MED17, PNKP, SLC25A19, STIL, WDR62, ZNF335 |
| Hydrocephalus | | |
| 402 | Non-syndromic hydrocephalus | L1CAM, CCDC88C, MPDZ |
| 403 | Hydrocephalus with congenital idiopathic intestinal pseudoobstruction | L1CAM |
| 404 | Hydrocephalus due to aqueductal stenosis | L1CAM |
| 405 | Hydrocephalus with Hirschsprung disease | L1CAM |
| Neurodegenerative conditions | | |
| 406 | Neuronal ceroid lipofuscinoses | CLN3, CLN5, CLN6, CLN8, CTSD, CTSF, MFSD8, PPT1, TPP1 |
| 407 | Parkinson disease, juvenile-onset | DNAJC6, FBXO7, PLA2G6, ATP13A2 |
| 408 | Encephalopathy, progressive | BSCL2, TBCD, NAXE |
| 409 | Moyamoya disease | GUCY1A1 |
| 410 | Neurodegeneration with brain iron accumulation | C19orf12, PANK2, PLA2G6 |
| 411 | Neurodegeneration due to cerebral folate transport deficiency | FOLR1 |
| 412 | Neurodegeneration with ataxia, dystonia, and gaze palsy, childhood-onset | SQSTM1 |
| 413 | Neurodegeneration, stress-induced, with variable ataxia and seizures | ADPRS* |
| 414 | | *Not screened in WA, QLD and SA |
| 415 | Infantile or childhood-onset striatonigral degeneration | NUP62, VAC14* |
| 416 | | *Not screened in WA, QLD and SA |
| 417 | PEHO syndrome | ZNHIT3 |
| 418 | Infantile cerebellar-retinal degeneration | ACO2 |
| 419 | Infantile neuroaxonal dystrophy 1 | PLA2G6 |
| 420 | Spastic tetraplegia, thin corpus callosum, and progressive microcephaly | SLC1A4 |
| 421 | Troyer syndrome | SPART |
| Ataxias | | |
| 422 | Ataxia-telangiectasia | ATM, MRE11 |
| 423 | Ataxia, early-onset, with oculomotor apraxia and hypoalbuminemia | APTX |
| 424 | Ataxia, cerebellar, Cayman type | ATCAY |

| | | |
|--------------------------------------|---|--|
| 425 | Ataxia, posterior column, with retinitis pigmentosa | FLVCR1 |
| 426 | Ataxia-oculomotor apraxia 4 | PNKP |
| 427 | Ataxia with isolated vitamin E deficiency | TPPA |
| 428 | Cerebellar ataxia, cognitive disability, and disequilibrium (CAMRQ) | WDR81, ATP8A2 |
| 429 | Spastic ataxia | KIF1C, MARS2, NKX6-2, SACS |
| 430 | Spinocerebellar ataxia | GRM1, PMPCA, SETX, SNX14, STUB1, SCYL1, TPP1, WWOX |
| Movement disorders | | |
| 431 | Choreoacanthocytosis | VPS13A |
| 432 | Dystonia | COL6A3, PRKRA* |
| | | <i>*Not screened in WA, QLD and SA</i> |
| 433 | Dystonia, dopa-responsive, due to sepiapterin reductase deficiency | SPR |
| 434 | Dystonia, DOPA-responsive, with or without hyperphenylalaninemia | GCH1 |
| 435 | Parkinsonism-dystonia, infantile | SLC6A3 |
| 436 | Segawa syndrome | TH |
| Epilepsy | | |
| 437 | Epilepsy, pyridoxine-dependent | ALDH7A1 |
| 438 | Epileptic encephalopathy, early infantile | AP3B2, ARV1, ARX, ARHGEF9, DENND5A, FRRS1L, MECP2, SLC13A5, SLC12A5, SLC25A22, TBC1D24, UBA5, WWOX |
| 439 | Epilepsy, progressive myoclonic | CSTB, EPM2A, GOSR2, KCTD7, NHLRC1, PRICKLE1, SCARB2, TBC1D24 |
| 440 | Hyperekplexia | ATAD1, SLC6A5 |
| 441 | Epilepsy, early-onset, vitamin B6-dependent | PLPBP |
| 442 | Epilepsy, X-linked, with variable learning disabilities and behaviour disorders | SYN1 |
| 443 | Epilepsy, hearing loss, and intellectual disability syndrome | SPATA5 |
| 444 | Cortical dysplasia-focal epilepsy syndrome | CNTNAP2 |
| 445 | Amish infantile epilepsy syndrome | ST3GAL5 |
| Intellectual disability | | |
| 446 | Non-syndromic intellectual disability, X-linked | AP1S2, ARX, ATRX, BRWD3, CASK, CLCN4, CUL4B, DLG3, FTSJ1, GDI1, HCFC1, IL1RAPL1, IQSEC2, MECP2, NEXMIF, NLGN4X, PAK3, RAB39B, RLIM, SLC16A2, SYP, THOC2, TSPAN7, USP9X, ZNF711 |
| 447 | Non-syndromic intellectual disability, autosomal recessive | ADAT3, CC2D1A, ELP2, GPT2, HERC2, KPTN, LINS1, MAN1B1, MBOAT7, MED23, METTL23, NSUN2, PGAP1, PIGG, TRAPPC9, TTI2, TUSC3 |
| 448 | Intellectual developmental disorder with microcephaly and short stature | PUS7 <i>*Not screened in WA, QLD and SA</i> |
| Other neurological conditions | | |
| 449 | Sensorineural hearing loss, premature ovarian failure (females), variable intellectual disability, spasticity, ataxia | CLPP |
| Cutaneous conditions | | |
| Ichthyosis | | |
| 450 | Ichthyosis, congenital, autosomal recessive | ABCA12, ALOX12B, ALOXE3, CERS3, CYP4F22, NIPAL4, TGM1 |
| 451 | Ichthyosis, leukocyte vacuoles, alopecia, and sclerosing cholangitis | CLDN1 |
| 452 | Epidermolytic hyperkeratosis | KRT10 |

| Cutis laxa | | |
|---|--|---|
| 453 | Cutis laxa, autosomal recessive | ALDH18A1, ATP6V0A2, EFEMP2, FBLN5, LTBP4, PYCR1 |
| Ectodermal dysplasia | | |
| 454 | Ectodermal dysplasia, ectrodactyly and macular dystrophy | CDH3 |
| 455 | Ectodermal dysplasia | EDA, EDAR, IKBKG, KRT85 |
| Cutaneous conditions affecting the nervous system | | |
| 456 | Xeroderma pigmentosum | ERCC2, ERCC4, ERCC5, XPA, XPC |
| Other cutaneous conditions | | |
| 457 | Kindler syndrome | FERMT1 |
| 458 | Epidermolysis bullosa | COL7A1, COL17A1, DSP, ITGA6, ITGB4, KRT14, KRT5, LAMA3, LAMB3, LAMC2, PLEC |
| 459 | Hyaline fibromatosis syndrome | ANTXR2 |
| 460 | Porokeratosis 3, disseminated superficial actinic | MVK |
| 461 | Keratosis linearis with ichthyosis congenital and sclerosing keratoderma | POMP |
| 462 | Netherton syndrome | SPINK5 |
| 463 | Poikilderma with neutropenia | USB1 |
| 464 | Restrictive dermopathy, lethal | LMNA, ZMPSTE24 |
| 465 | Trichothiodystrophy | ERCC2, GTF2H5, MPLKIP |
| 466 | Transient bullous of the newborn | COL7A1 |
| Respiratory conditions | | |
| Surfactant conditions | | |
| 467 | Surfactant metabolism dysfunction, pulmonary | ABCA3, SFTPB |
| Ciliary dyskinesia | | |
| 468 | Ciliary dyskinesia, primary | OCAD2*, CCDC103, CCDC114, CCDC39, CCDC40, CCNO, DNAAF1, DNAAF3, DNAAF4, DNAAF5, DNAAF6^, GAS8, HYDIN, LRRC6, RSPH1, RSPH4A, RSPH9, SPAG1, ZMYND10 |
| | | <i>*Formerly known as ARMCA</i> |
| | | <i>^Formerly known as PIH1D3</i> |
| 469 | Ciliary dyskinesia, primary, with or without situs inversus | DNAH11, DNAH5, DNAI1, DNAI2 |
| Other respiratory conditions | | |
| 470 | Cystic fibrosis | CFTR |
| 471 | Pulmonary veno-occlusive disease | EIF2AK4 |
| 472 | Interstitial lung and liver disease | MARS1 |
| Immunological conditions | | |
| Chronic granulomatous disease | | |
| 473 | Deficiency of NCF-1 | NCF1 |
| 474 | Deficiency of NCF-2 | NCF2 |
| 475 | Deficiency of CYBA | CYBA |
| 476 | X-linked | CYBB |
| 477 | Combined cellular and humoral immune defects with granulomas | RAG1, RAG2 |
| Complement deficiencies | | |
| 478 | C1q | C1QA, C1QB, C1QC |

| | | |
|---|--|--|
| 479 | C3 | C3 |
| 480 | C5 | C5 |
| 481 | C6 | C6 |
| 482 | C7 | C7 |
| 483 | C8 | C8B |
| 484 | Factor D | CFD |
| 485 | Factor H | CFH |
| 486 | Factor I | CFI |
| Immunodeficiencies | | |
| 487 | Immunodeficiency | ATP6AP1, CARD11, CD3D, CTPS1, DOCK2, ICOS, IKBKB, IL12RB1, IL17RA LAT, LRBA, MALT1, ORAI1, PGM3, RORC, STIM1, TYK2 |
| 488 | Mycobacteriosis | CYBB, IFNGR1, IFNGR2, STAT1 |
| 489 | Purine nucleoside phosphorylase deficiency | PNP |
| 490 | Hyper-IgM | CD40, CD40LG |
| 491 | Hyper-IgD syndrome | MVK |
| 492 | Hyper-IgE recurrent infection syndrome | DOCK8 |
| 493 | Centromeric instability-facial anomalies syndrome | DNMT3B, ZBTB24 |
| 494 | Combined immunodeficiency, moderate | IL2RG |
| 495 | Combined immunodeficiency and megaloblastic anaemia with or without hyperhomocysteinemia | MTHFD1 |
| Neutropenia | | |
| 496 | Severe, congenital | G6PC3, HAX1, JAGN1, VPS45, WAS |
| Severe combined immunodeficiencies | | |
| 497 | Severe combined immunodeficiency | IL2RG |
| 498 | Adenosine deaminase deficiency | ADA |
| 499 | With microcephaly, growth retardation, and sensitivity to ionizing radiation | NHEJ1 |
| 500 | Athabascan type | DCLRE1C |
| 501 | B cell-negative | RAG1, RAG2 |
| 502 | T-cell negative, B-cell/natural killer cell-positive type | IL7R, JAK3 |
| 503 | Reticular dysgenesis | AK2 |
| Other immunological conditions | | |
| 504 | Agammaglobulinemia | BTK, IGHM |
| 505 | Autoimmune disease, multisystem, with facial dysmorphism | ITCH |
| 506 | Autoinflammation, lipodystrophy, and dermatosis syndrome | PSMB8 |
| 507 | Bone marrow failure syndrome | ERCC6L2, DNAJC21 |
| 508 | Bare lymphocyte syndrome | CIITA, RFXAP, TAP1 |
| 509 | Candidiasis, familial | CARD9 |
| 510 | Histiocytosis-lymphadenopathy plus syndrome | SLC29A3 |
| 511 | Hemophagocytic lymphohistiocytosis | PRF1, STX11, STXBP2, UNC13D |
| 512 | Hepatic veno-occlusive disease with immunodeficiency | SP110 |
| 513 | Interleukin 1 receptor antagonist deficiency | IL1RN |

Version 2.0 -updated 08.03.2023

| | | |
|--|--|-----------------------------|
| 514 | Immunodysregulation, polyendocrinopathy, and enteropathy | FOXP3 |
| 515 | Leukocyte adhesion deficiency | FERMT3, ITGB2 |
| 516 | Lymphoproliferative syndrome | CD27, ITK, SH2D1A, XIAP |
| 517 | MHC class II deficiency, complementation group B | RFXANK |
| 518 | Natural killer cell and glucocorticoid deficiency with DNA repair defect | MCM4 |
| 519 | Platelet abnormalities with eosinophilia and immune-mediated inflammatory disease | ARPC1B |
| 520 | Properdin deficiency | CFP |
| 521 | Pyogenic bacterial infections, recurrent, due to MYD88 deficiency | MYD88 |
| 522 | Selective T-cell defect | ZAP70 |
| 523 | T-cell immunodeficiency, congenital alopecia, and nail dystrophy | FOXN1 |
| 524 | Darsun syndrome | G6PC3 |
| 525 | Majeed syndrome | LPIN2 |
| 526 | Omenn syndrome | DCLRE1C, RAG1, RAG2 |
| 527 | Wiskott-Aldrich syndrome | WAS |
| Gastrointestinal conditions | | |
| Severe congenital diarrhea | | |
| 528 | With tufting enteropathy, congenital | EPCAM |
| 529 | Secretory chloride, congenital | SLC26A3 |
| 530 | Secretory sodium, congenital, | SPINT2, SLC9A3 |
| 531 | Protein-losing enteropathy type | DGAT1 |
| Hepatic conditions | | |
| 532 | Cholestasis, progressive familial intrahepatic | ABCB11, ABCB4, ATP8B1, TJP2 |
| 533 | Hepatic lipase deficiency | LIPC |
| 534 | Porphyria | ALAD, UROS |
| 535 | Liver failure, transient infantile | TRMU |
| 536 | Hypercholanaemia | TJP2 |
| Other gastrointestinal conditions | | |
| 537 | Microvillus inclusion disease | MYO5B |
| 538 | Bile acid synthesis defect, congenital | AKR1D1, CYP7B1, HSD3B7 |
| 539 | Congenital short bowel syndrome | CLMP, FLNA |
| 540 | Complement hyperactivation, angiopathic thrombosis, and protein-losing enteropathy | CD55 |
| 541 | Meconium ileus | GUCY2C |
| 542 | Mitchell-Riley syndrome | RFX6 |
| 543 | Chronic atrial and intestinal dysrhythmia | SGO1 |
| 544 | Inflammatory bowel disease, congenital, severe | IL10RA, IL10RB* |
| *Not screened in WA, QLD and SA | | |
| 545 | Trichohepatoenteric syndrome | SKIV2L, TTC37 |
| 546 | Folate malabsorption, hereditary | SLC46A1 |
| 547 | Gastrointestinal defects and immunodeficiency syndrome | TTC7A |
| 548 | Hyperbilirubinemia, familial transient neonatal | UGT1A1 |

| Haematological conditions | | |
|--------------------------------------|--|--|
| Anaemia | | |
| 549 | Sideroblastic, with ataxia | ABCB7 |
| 550 | Anaemia, sideroblastic, pyridoxine-refractory | SLC25A38 |
| 551 | Dyserythropoietic anaemia | SEC23B |
| 552 | Haemolytic anaemia due to hexokinase deficiency | HK1 |
| 553 | Fanconi anaemia | ERCC4, FANCA, FANCB, FANCC, FANCD2, FANCE, FANCF, FANCG, FANCI, FANCL, UBE2T |
| Clotting conditions | | |
| 554 | Hypoprothrombinemia | F2 |
| 555 | Factor V deficiency | F5 |
| 556 | Factor VII deficiency | F7 |
| 557 | Haemophilia A | F8 |
| 558 | Haemophilia B | F9 |
| 559 | Afibrinogenemia | FGA, FGB, FGG |
| 560 | Dysfibrinogenemia | FGA, FGB, FGG |
| 561 | Hypodysfibrinogenemia | FGA, FGB, FGG |
| 562 | Hypofibrinogenemia | FGA, FGB, FGG |
| 563 | Combined factor V and VIII deficiency | LMAN1, MCFD2 |
| 564 | Thrombotic thrombocytopenic purpura | ADAMTS13 |
| 565 | Thrombocytopenia, congenital amegakaryocytic | MPL |
| 566 | Thrombophilia | PROC, PROS1 |
| 567 | von Willebrand disease | VWF |
| 568 | Thrombocytopenia, X-linked | WAS |
| Other haematological conditions | | |
| 569 | Vitamin K-dependent clotting factors, combined deficiency of | VKORC1 |
| 570 | Beta thalassemia | HBB |
| 571 | Sickle cell disease | HBB |
| 572 | Atransferrinemia | TF |
| Cardiovascular conditions | | |
| Arrhythmias | | |
| 573 | Ventricular tachycardia, catecholaminergic polymorphic | CASQ2 |
| 574 | Jervell and Lange-Nielsen syndrome | KCNQ1 |
| 575 | Ventricular tachycardia, catecholaminergic polymorphic with or without muscle weakness | TRDN |
| Cardiomyopathies | | |
| 576 | Cardiomyopathy, dilated, with woolly hair and keratoderma (Naxos disease) | DSP, JUP |
| 577 | Dilated cardiomyopathy | FKTN |
| Structural cardiovascular conditions | | |
| 578 | Arterial calcification of infancy | ENPP1 |
| 579 | Cardiac valvular dysplasia, X-linked | FLNA |
| 580 | Right atrial isomerism | GDF1 |

| | | |
|--|---|---|
| 581 | Hypoplastic left heart syndrome | GJA1 |
| 582 | Arterial tortuosity syndrome | SLC2A10 |
| 583 | Heterotaxy, visceral | ZIC3, MMP21 |
| 584 | Congenital heart defects | ZIC3 |
| Other cardiovascular conditions | | |
| 585 | Sudden cardiac failure, infantile | PPA2 |
| Renal conditions | | |
| Syndromic renal conditions | | |
| 586 | Alport syndrome | COL4A3, COL4A4, COL4A5 |
| 587 | Dent disease | OCRL, CLCN5 |
| 588 | Renal tubular acidosis with other abnormalities | ATP6V1B1, SLC4A4, SLC4A1 |
| 589 | Bartter syndrome | BSND, CLCNKB, KCNJ1, SLC12A1 |
| 590 | Renal-hepatic-pancreatic dysplasia | NPHP3, NEK8 |
| 591 | Polycystic kidney and hepatic disease | PKHD1 |
| 592 | Nephrotic syndrome | COQ8B, DGKE, LAMB2, NPHS1, NPHS2, NUP107, NUP93, PLCE1, SGPL1 |
| Tubular conditions | | |
| 593 | Renal tubular dysgenesis | ACE, AGT, REN |
| 594 | Renal tubular acidosis | ATP6V0A4 |
| Other renal conditions | | |
| 595 | Focal segmental glomerulosclerosis | CRB2 |
| 596 | Pseudohypoaldosteronism | SCNN1A, SCNN1B |
| 597 | Nephronophthisis and related conditions | ANKS6, DCDC2, INVS, MAPKBP1, NPHP1, NPHP3, NPHP4, TMEM67, TTC21B, WDR19 |
| 598 | Nephrogenic diabetes insipidus | AQP2 |
| Neuromuscular conditions | | |
| Atrophy | | |
| 600 | Spinal muscular atrophy with progressive myoclonic epilepsy | ASAH1 |
| 601 | Spinal muscular atrophy | SMN1, UBA1 |
| 602 | Spinal muscular atrophy with congenital bone fractures | ASCC1 |
| Arthrogryposis | | |
| 603 | Arthrogryposis, distal | ECEL1, PIEZO2 |
| 604 | Arthrogryposis lethal with anterior horn cell disease | GLE1 |
| 605 | Arthrogryposis, renal dysfunction, and cholestasis | VIPAS39, VPS33B |
| 606 | Arthrogryposis multiplex congenita | LGI4 |
| Dystrophy | | |
| 607 | Limb-girdle muscular dystrophy | CAPN3, DYSF, PLEC, SGCA, SGCB, SGCD, SGCG, TCAP, TRAPPC11, TRIM32, TTN |
| 608 | Muscular dystrophy-dystroglycanopathy | B3GALNT2, CRPPA, FKRP, FKTN, GMPPB, LARGE1, POMGNT1, POMGNT2, POMK, POMT1, POMT2, RXYL1 |
| 609 | Muscular dystrophy, congenital | CHKB, LAMA2 |
| 610 | Ullrich congenital muscular dystrophy | COL6A1, COL6A2, COL6A3 |
| 611 | Duchenne muscular dystrophy | DMD |

| | | |
|-----|---|--|
| | | <i>*In VIC and NSW, most DMD carriers are unable to be detected due to limitations in testing technology</i> |
| 612 | Becker muscular dystrophy | DMD |
| | | <i>*As above</i> |
| 613 | Emery-Dreifuss muscular dystrophy | EMD, FHL1, LMNA |
| 614 | Muscular dystrophy, rigid spine | SELENON |
| | Myopathy | |
| 615 | Myopathy, congenital | ACTA1 |
| 616 | Nemaline myopathy | ACTA1, CFL2, KLHL40, KLHL41, LMOD3, NEB, TNNT1, TPM3 |
| 617 | Myopathy, centronuclear, autosomal recessive | BIN1, SPEG* |
| | | <i>*Not screened in WA, QLD and SA</i> |
| 618 | Distal myopathy | DYSF |
| 619 | Myopathy with extrapyramidal signs | MICU1 |
| 620 | Myopathy, X-linked | FHL1 |
| 621 | Myopathy, X-linked, with excessive autophagy | VMA21 |
| 622 | Inclusion body myopathy | GNE |
| 623 | Myopathy, areflexia, respiratory distress, and dysphagia, early-onset | MEGF10 |
| 624 | Myotubular myopathy, X-linked | MTM1 |
| 625 | Minicore myopathy | RYR1 |
| 626 | Myopathy, myofibrillar | KY, PYROXD1 |
| 627 | Central core disease | RYR1 |
| 628 | Myopathy, early-onset, with fatal cardiomyopathy | TTN |
| 629 | CAP myopathy | TPM3 |
| | Myasthenia | |
| 630 | Myasthenic syndrome | AGRN, ALG2, CHAT, CHRNA1, CHRND, CHRNE, COLQ, DOK7, DPAGT1, GFPT1, IGHMBP2, MUSK, RAPSN, SLC5A7 |
| | Neuropathy | |
| 631 | Charcot-Marie-Tooth disease | FGD4, FIG4, GDAP1, LMNA, MFN2, MPZ, MTMR2, NDRG1, PRPS1, PRX, SBF2, SH3TC2 |
| 632 | Dysautonomia, familial | ELP1 |
| 633 | Insensitivity to pain, congenital | SCN9A, NTRK1 |
| 634 | Neuromyotonia and axonal neuropathy | HINT1 |
| 635 | Neuropathy, hereditary motor and sensory | HK1, IGHMBP2, KIF1A, SLC25A46 |
| 636 | Neuropathy, hereditary sensory and autonomic | NGF, PRDM12, RETREG1, WNK1 |
| 637 | Giant axonal neuropathy | GAN |
| | Rhabdomyolysis | |
| 638 | Myoglobinuria, acute recurrent | LPIN1 |
| | Spasticity | |
| 640 | Spastic paralysis, infantile onset ascending | ALS2 |
| 641 | Juvenile primary lateral sclerosis | ALS2 |

| | | |
|-------------------------------------|--|---|
| 642 | Spastic paraplegia | AP4M1, AP4B1, AP4S1, ATP13A2, ALDH18A1, B4GALNT1, CYP2U1, CYP7B1, DDHD2, DSTYK, FA2H, FARS2, GBA2, GJC2, KIF1A, NT5C2, PLP1, PNPLA6, SPG11, VPS37A, ZFYVE26 |
| Connective tissue conditions | | |
| Ehlers-Danlos syndrome (EDS) | | |
| 643 | Ehlers-Danlos syndrome, progeroid type | ADAMTS2, B3GALT6, B4GALT7, PLOD1 |
| 644 | Ehlers-Danlos syndrome, musculocontractural type | CHST14 |
| 645 | Ehlers-Danlos syndrome with progressive kyphoscoliosis, myopathy, and hearing loss | FKBP14 |
| Vascular conditions | | |
| 646 | Polyarteritis nodosa, childhood-onset | ADA2 |
| 647 | Meester-Loeys syndrome | BGN |
| Ocular conditions | | |
| Albinism | | |
| 648 | Hermansky-Pudlak syndrome | HPS1, HPS3, HPS4, HPS5, HPS6 |
| 649 | Oculocutaneous albinism | GPR143, LRMDA, OCA2, SLC24A5, SLC45A2, TYR, TYRP1 |
| Dystrophies | | |
| 650 | Retinal dystrophy, early-onset severe | LRAT, RCBTB1, CFAP410 |
| 651 | Macular dystrophy with central cone involvement | MFSD8 |
| 652 | Cone-rod dystrophy | AIPL1, C8orf37, CEP78, CNGB3, KCNV2, PDE6C, RPGRIP1, SEMA4A |
| Microphthalmia | | |
| 653 | Isolated | ALDH1A3, RAX, VSX2 |
| 654 | With coloboma | STRA6, VSX2 |
| 655 | Syndromic | STRA6, RARB |
| Other ocular conditions | | |
| 656 | Achromatopsia | ATF6, CNGA3, CNGB3, GNAT2 |
| 657 | Aphakia | FOXE3 |
| 658 | Congenital cataracts | AGK, FYCO1, NHS, TDRD7 |
| 659 | Cone-rod synaptic disorder, congenital non-progressive | CABP4 |
| 660 | Choroideremia | CHM |
| 661 | Congenital stationary night blindness | GPR179, NYX |
| 662 | Persistent hyperplastic primary vitreous | ATOH7 |
| 663 | Macular degeneration (congenital) | CNGB3, RPGR |
| 664 | Leber congenital amaurosis | AIPL1, CEP290, CRB1, GUCY2D, LCA5, LRAT, NMNAT1, RD3, RDH12, RPE65, RPGRIP1, SPATA7, TULP1 |
| 665 | Glaucoma (congenital) | CYP1B1 |
| 666 | Peters anomaly | CYP1B1 |
| 667 | Retinal arterial macroaneurysm with supra-valvular pulmonic stenosis | IGFBP7 |
| 668 | Retinitis pigmentosa | AGBL5, AIPL1, C8orf37, CRB1, DHDDS, IFT172, LRAT, MERTK, REEP6, RP2, SEMA4A, SPATA7, TULP1, USH2A |
| 669 | Progressive external ophthalmoplegia | POLG |
| 670 | Brittle cornea syndrome | PRDM5 |

| | | |
|--------------------------------|--|--|
| 671 | Corneal opacification and other ocular anomalies | PXDN |
| 672 | Gaze palsy, horizontal, with progressive scoliosis | ROBO3 |
| 673 | Foveal hypoplasia, with or without optic nerve misrouting and/or anterior segment dysgenesis | SLC38A8 |
| 674 | Optic atrophy | TMEM126A |
| Skeletal conditions | | |
| Dysplasias | | |
| 675 | Spondyloepiphyseal dysplasia with other abnormalities | CHST3, CCN6 |
| 676 | Anauxetic dysplasia | POP1, RMRP |
| 677 | Spondyloepimetaphyseal dysplasia | B3GALT6, NANS |
| 678 | Desbuquois dysplasia | CANT1, XYLT1 |
| 679 | Schneckenbecken dysplasia | SLC35D1 |
| 680 | Short-rib thoracic dysplasia with or without polydactyly | CEP120, DYNC2H1, DYNC2I1*, DYNC2I2^, DYNC2LI1, KIAA0586, TTC21B, WDR35, IFT140, IFT172, IFT80, NEK1 *Formerly known as WDR60 ^Formerly known as WDR34 |
| 681 | Spondylometaphyseal dysplasia, short limb-hand type | DDR2 |
| 682 | Spondylo-megaepiphyseal-metaphyseal dysplasia | NKX3-2 |
| 683 | Chondrodysplasia, Grebe type | GDF5 |
| 684 | Oculodentodigital dysplasia | GJA1 |
| 685 | Smith-McCort dysplasia | DYM, RAB33B |
| 686 | Omodysplasia | GPC6 |
| 687 | Dysegmental dysplasia, Silverman-Handmaker type | HSPG2 |
| 688 | Cranioectodermal dysplasia | IFT122 |
| 689 | Opsismodysplasia | INPPL1 |
| 690 | Otospondylomegaepiphyseal dysplasia | COL11A2 |
| 691 | Greenberg skeletal dysplasia | LBR |
| 692 | Cleft lip/palate-ectodermal dysplasia syndrome | NECTIN1 |
| 693 | Spondylometaphyseal dysplasia with additional abnormalities | PCYT1A, CFAP410 |
| 694 | Chondrodysplasia, Blomstrand type | PTH1R |
| 695 | Metaphyseal dysplasia without hypotrichosis | RMRP |
| 696 | Cranio-lenticulosutural dysplasia | SEC23A |
| 697 | Langer mesomelic dysplasia | SHOX |
| 698 | De la Chapelle dysplasia | SLC26A2 |
| 699 | Diastrophic dysplasia | SLC26A2 |
| 700 | Craniofrontonasal dysplasia | EFNB1 |
| 701 | Chondrodysplasia punctata, rhizomelic | AGPS, GNPAT, PEX7 |
| 702 | Mandibuloacral dysplasia | LMNA |
| Acromesomelic dysplasia | | |
| 703 | Hunter-Thompson type | GDF5 |
| 704 | Maroteaux type | NPR2 |
| 705 | Demirhan type | BMPR1B |
| Arthropathies | | |

| | | |
|--|--|---|
| 706 | Arthropathy, progressive pseudorheumatoid | CCN6 |
| 707 | Cranioosteoarthropathy | HPGD |
| 708 | Hypertrophic osteoarthropathy | HPGD |
| 709 | Multicentric osteolysis, nodulosis, and arthropathy | MMP2 |
| 710 | Camptodactyly-arthropathy-coxa vara-pericarditis syndrome | PRG4 |
| Short stature and dwarfism | | |
| 711 | Multiple joint dislocations, short stature, craniofacial dysmorphism, and congenital heart defects | B3GAT3 |
| 712 | Amelogenesis imperfecta and short stature | LTBP3 |
| 713 | Microcephalic osteodysplastic primordial dwarfism | PCNT, RNU4ATAC |
| 714 | Short stature, onychodysplasia, facial dysmorphism, and hypotrichosis | POC1A |
| 715 | Short stature, optic nerve atrophy, and Pelger-Huet anomaly | NBAS |
| 716 | Mulibrey nanism | TRIM37 |
| Other skeletal conditions | | |
| 717 | 3-M syndrome | CCDC8, OBSL1, CUL7 |
| 718 | Antley-Bixler syndrome | POR |
| 719 | Hypophosphatasia, infantile | ALPL |
| 720 | Diaphanospondylodysostosis | BMPER |
| 721 | Meier-Gorlin syndrome | CDT1, CDC45, ORC1, ORC6 |
| 722 | Osteopetrosis, infantile | CA2, CLCN7, OSTM1, TCIRG1, TNFRSF11A, TNFSF11 |
| 723 | Fibrochondrogenesis | COL11A1, COL11A2 |
| 724 | Osteogenesis imperfecta, recessive type | CRTAP, FKBP10, P3H1, PPIB*, SERPINF1, WNT1 |
| *Not screened in WA, QLD and SA | | |
| 725 | Pycnodysostosis | CTSK |
| 726 | Spondylocostal dysostosis | DLL3, HES7, MESP2 |
| 727 | Ellis-van Creveld syndrome | EVC, EVC2 |
| 728 | Raine syndrome | FAM20C |
| 729 | Bruck syndrome | FKBP10, PLOD2 |
| 730 | Spondylocarpotarsal synostosis syndrome | FLNB |
| 731 | Brachydactyly | GDF5 |
| 732 | Geroderma osteodysplasticum | GORAB |
| 733 | Craniosynostosis | IL11RA |
| 734 | Alazami syndrome | LARP7 |
| 735 | Schwartz-Jampel syndrome | HSPG2 |
| 736 | Stuve-Wiedemann syndrome/Schwartz-Jampel type 2 syndrome | LIFR |
| 737 | Acheiropody | LMBR1 |
| 738 | Cenani-Lenz syndactyly syndrome | LRP4 |
| 739 | Sclerosteosis | LRP4, SOST |
| 740 | Osteoporosis-pseudoglioma syndrome | LRP5 |
| 741 | Orofacial cleft | NECTIN1 |
| 742 | Brachyolmia 4 with mild epiphyseal and metaphyseal change | PAPSS2 |
| 743 | Carpenter syndrome | RAB23, MEGF8 |

| | | |
|-----|--|-----------------|
| 744 | Baller-Gerold syndrome | RECQL4 |
| 745 | RAPADILINO syndrome | RECQL4 |
| 746 | Cartilage-hair hypoplasia | RMRP |
| 747 | Robinow syndrome | ROR2 |
| 748 | Van den Ende-Gupta syndrome | SCARF2 |
| 749 | Frank-ter Haar syndrome | SH3PXD2B |
| 750 | Achondrogenesis | SLC26A2, TRIP11 |
| 751 | Atelosteogenesis | SLC26A2 |
| 752 | Van Buchem disease | SOST |
| 753 | Kenny-Caffey syndrome | TBCE |
| 754 | Paget disease of bone | TNFRSF11B |
| 755 | Ulna and fibula, absence of, with severe limb deficiency | WNT7A |
| 756 | Fuhrmann syndrome | WNT7A |
| 757 | CODAS syndrome | LONP1 |
| 758 | Keutel syndrome | MGP |
| 759 | Steel syndrome | COL27A1 |