Supplemental Table 1

Inherited retinal disease genes:

ABCA4, ABCC6, ABHD12, ACBD5, ADAM9, ADAMTS18, AHI1, AIPL1, ALMS1, ARL13B, ARL2BP, ARL2BP, ARL6, ATXN7, BBIP1, BBIP1, BBS1, BBS10, BBS12, BBS2, BBS4, BBS5, BBS7, BBS9, BEST1, C1QTNF5, C21orf2, C2ORF71, C5orf42, C8orf37, CA4, CABP4, CACNA1F, CACNA2D4, CAPN5, CC2D2A, CDH23, CDH3, CDHR1, CEP164, CEP290, CEP41, CEP83, CERKL, CHM, CIB2, CLN2, CLN3, CLN5, CLN6, CLN8, CLRN1, CNGA1, CNGA3, CNGB1, CNGB3, CNNM4, COL11A1, COL2A1, COL9A1, CRB1, CRX, CSPP1, CYP4V2, DFNB31, DHDDS, DHX38, DTHD1, EFEMP1, ELOVL4, EMC1, ERCC6, EYS, FAM161A, FLVCR1, FSCN2, FZD4, GDF6, GNAT1, GNAT2, GNB1, GNPTG, GPR125, GPR143, GPR179, GPR98, GRK1, GRM6, GRN, GUCA1A, GUCA1B, GUCY2D, HARS, IDH3B, IFT122, IFT140, IFT172, IFT27, IFT43, IFT80, IFT88, IKBKG, IMPDH1, IMPG1, IMPG2, INPP5E, INVS, IQCB1, ITM2B, JAG1, KCNJ13, KCNV2, KCTD7, KIAA1549, KIF11, KIZ, KLHL7, LCA5, LRAT, LRIT3, LRP5, LZTFL1, MAK, MERTK, MFN2, MFRP, MFSD8, MKKS, MKS1, MTTP, MVK, MYO7A, NDP, NEK2, NMNAT1, NPHP1, NPHP3, NPHP4, NR2E3, NRL, NUB1, NYX, OAT, OCA2, OFD1, OPA1, OPA3, OPN1LW, OPN1MW, OPN1SW, OTX2, PANK2, PAX2, PCDH15, PCYT1A, PDE6A, PDE6B, PDE6C, PDE6G, PDE6H, PDZD7, PEX1, PEX10, PEX14, PEX16, PEX19, PEX2, PEX5, PEX6, PEX7, PGK1, PHYH, PITPNM3, PLA2G5, POC1B, PPT1, PRCD, PROM1, PRPF3, PRPF31, PRPF4, PRPF6, PRPF8, PRPH2, RAB28, RAX2, RBP3, RBP4, RD3, RDH12, RDH5, RGR, RGS9, RGS9BP, RHO, RIMS1, RLBP1, ROM1, RP1, RP1L1, RP2, RP9, RPE65, RPGR, RPGRIP1, RPGRIP1L, RS1, SAG, SDCCAG8, SEMA4A, SLC24A1, SLC45A2, SLC4A5, SLC7A14, SNRNP200, SPATA7, TEAD1, TIMM8A, TIMP3, TMEM126A, TMEM231, TMEM237, TMEM67, TOPORS, TPP1, TREX1, TRIM32, TRPM1, TSPAN12, TTC21B, TTC8, TTLL5, TTPA, TUB, TULP1, TYR, TYRP1, UNC119, USH1C, USH1G, USH2A, USH3A, VCAN, VPS13B, WDPCP, WDR19, WDR34, WDR35, WFS1, ZNF423, ZNF513

Human retinal gene therapy clinical trials:

Phase 1, 1/2, and 3 *RPE65*-Leber congenital amaurosis
Phase 1/2 *ABCA4*-Stargardt disease
Phase 1/2 *CHM*-choroideremia
Phase 1/2 *RS1*-X-linked retinoschisis
Phase 1/2 *MYO7A*-Usher syndrome
Phase 1/2 *CNGA3*-Achromatopsia
Phase 1/2 *CNGB3*-Achromatopsia
Phase 1 *MERTK*-retinitis pigmentosa
Phase 1 *ND4*-Leber's Hereditary Optic Neuropathy

Preclinical animal retinal gene-therapy studies:

ABCA4-Stargardt disease
AIPL1-cone-rod dystrophy and Leber congenital amaurosis
BBS1-Bardet Biedl syndrome and retinitis pigmentosa
BEST1-macular dystrophy
CEP290-retinal dystrophy
CDH3-retinal dystrophy
CHM-choroideremia
CNGA3-Achromatopsia
CNGB3-Achromatopsia
CRB1-retinal dystrophy
GUCY2D-Leber congenital amaurosis
MERTK-retinitis pigmentosa
MRFP-retinitis pigmentosa
MYO7A-Usher syndrome
ND4-Leber's Hereditary Optic Neuropathy
NR2E3-retinitis pigmentosa and enhanced S-cone syndrome
PDE6β-retinitis pigmentosa
PRPH2-retinal dystrophy
RD3-Leber congenital amaurosis
RHO-retinitis pigmentosa
RLBP1-retinitis pigmentosa
RP1-retinitis pigmentosa
RPE65-Leber congenital amaurosis
RPGR-X-linked retinitis pigmentosa
RPGRIP1-Leber congenital amaurosis and cone-rod dystrophy
RS1-X-linked retinoschisis
SPATA7-Leber congenital amaurosis and retinitis pigmentosa