AASS	ASL	CCBE1	DCX	FANCM	GNPTAB	KIF7
ABAT	ASPA	CD96	DDC	FBN1	GNPTG	KIRREL3
ABCD1	ASPM	CDH15	DDOST	FGD1	GNS	KRAS
ABHD5	ASS1	CDK5RAP2	DDX59	FGF14	GPC3	L1CAM
ACOX1	ASXL1	CDKL5	DHCR7	FGFR1	GPHN	L2HGDH
ACSL4	ATL1	CENPJ	DKC1	FGFR2	GPI	LAMA2
ADAR	ATP6AP2	CEP135	DLG3	FGFR3	GPR56	LAMP2
ADAT3	ATP7A	CEP152	DNAJC19	FH	GRIA3	LARGE
ADCK3	ATP8A2	CEP290	DOCK8	FKRP	GRIK2	LRP5
ADSL	ATRX	CEP41	DOLK	FKTN	GRIN1	MAN1B1
AGA	AUH	CHD7	DPAGT1	FLNA	GRIN2B	MAN2B1
AHI1	B3GALNT2	CHKB	DPM1	FOXG1	GSS	MANBA
AIMP1	B3GALTL	CHMP1A	DPM2	FOXL2	GTDC2	MAOA
ALDH18A1	B3GNT1	CLIC2	DPM3	FTCD	GUSB	MAP2K1
ALDH3A2	B4GALT1	CLN3	DPYD	FTSJ1	HCCS	MAP2K2
ALDH5A1	B4GALT7	CLN5	DYM	FUCA1	HCFC1	MASP1
ALDH7A1	B9D1	CLN6	DYNC1H1	GABRG2	HDAC8	MBD5
ALG1	B9D2	CLN8	DYRK1A	GALC	HEXA	MCOLN1
ALG11	BBS1	CNKSR2	EBP	GALE	HEXB	MCPH1
ALG12	BBS10	COG1	EIF2S3	GALNS	HGSNAT	MECP2
ALG13	BBS12	COG4	EPB41L1	GALT	HPRT1	MED12
ALG2	BBS2	COG5	ERCC2	GAMT	HRAS	MED23
ALG3	BBS4	COG6	ERCC3	GAN	HSD17B10	MFSD8
ALG6	BBS5	COG7	ERCC4	GATAD2B	HSPD1	MGAT2
ALG8	BBS7	COG8	ERCC6	GATM	HSPG2	MID1
ALG9	BBS9	COL2A1	ERCC8	GBA	HUWE1	MKKS
AMT	BCOR	COL4A1	ERLIN2	GCDH	HYAL1	MKS1
AP1S2	BRAF	COMP	ESCO2	GCH1	IDS	MLC1
AP4B1	BRCA2	COQ2	ETFA	GCSH	IDUA	MLL2
AP4E1	BRIP1	COQ4	ETFB	GDI1	IGBP1	MLYCD
AP4M1	BRWD3	COQ6	ETFDH	GFAP	IL1RAPL1	MMAA
AP4S1	BSCL2	COQ9	ETHE1	GJB1	INPP5E	MMAB
ARG1	BTD	CPS1	EXOSC3	GJB6	INSR	MMACHC
ARHGEF6	C5ORF42	CRADD	FAM126A	GJC2	IQSEC2	MOCS1
ARHGEF9	CA2	CRBN	FANCA	GK	ISPD	MOCS2
ARID1A	CA8	CTCF	FANCB	GLB1	ITPR1	MOGS
ARID1B	CACNA1C	CTNNB1	FANCC	GLDC	JAG1	MPDU1
ARL13B	CACNG2	CTSA	FANCD2	GLI3	KCNC3	MPI
ARL6	CANT1	CTSD	FANCE	GLYCTK	KCNJ10	MTHFR
ARSA	CASC5	CUL4B	FANCF	GM2A	KDM5C	MTR
ARSB	CBS	CYB5R3	FANCG	GMPPB	KDM6A	MVK
ARX	CC2D1A	CYP27A1	FANCI	GNAS	KIAA2022	MYCN
ASAH1	CC2D2A	DARS2	FANCL	GNE	KIF1A	MYO5A

NAA10	PEX12	RAB3GAP2	SLC7A7	TMEM237
NAGLU	PEX13	RAD21	SLC9A6	TMEM5
NBN	PEX14	RAD51C	SLX4	TMEM67
NDE1	PEX16	RAF1	SMAD4	TPI1
NDP	PEX19	RARS2	SMARCA4	TPP1
NFIX	PEX2	RBM10	SMARCB1	TRAPPC9
NGLY1	PEX26	RECQL4	SMC1A	TREM2
NHS	PEX3	RELN	SMC3	TREX1
NIPBL	PEX5	RFT1	SMPD1	TRIM32
NLGN4X	PEX6	RNASEH2A	SMS	TSC1
NLRP3	PEX7	RNASEH2B	SOS1	TSC2
NOTCH2	PGK1	RNASEH2C	SOX3	TSEN2
NOTCH3	PGM1	ROGDI	SPAST	TSEN34
NPC1	PHC1	RPGRIP1L	SPG11	TSEN54
NPC2	PHF6	RPS6KA3	SPRED1	TSPAN7
NPHP1	PHF8	SACS	SPTAN1	TTC21B
NPHP3	PIGL	SAMHD1	SRD5A3	TTC8
NRAS	PLA2G6	SAR1B	SRPX2	TUBA1A
NSD1	PLP1	SBDS	ST3GAL3	TUBB4A
NSDHL	PMM2	SC5DL	STIL	TUSC3
NSUN2	PNKP	SCN1A	STXBP1	TWIST1
NTRK1	PNP	SCN2A	SUCLA2	TYROBP
OCRL	PNPO	SCN9A	SUCLG1	UBE2A
OFD1	POLR3A	SEMA3E	SUMF1	UBE3A
OPA3	POLR3B	SEPSECS	SUOX	UBR1
OPHN1	POMGNT1	SETBP1	SYN1	UMPS
OTC	POMT1	SGSH	SYNGAP1	UPF3B
PACS1	POMT2	SH3PXD2B	SYP	UROC1
PAFAH1B1	PORCN	SHROOM4	TAT	VLDLR
PAH	PPT1	SIL1	TBCE	VPS13B
PAK3	PQBP1	SLC12A6	TCF4	VRK1
PALB2	PRKAR1A	SLC16A2	TCIRG1	WDPCP
PAX3	PRPS1	SLC17A5	TCTN1	WDR62
PAX6	PRSS12	SLC1A3	TCTN2	ZDHHC15
PCBD1	PTCH1	SLC25A15	TCTN3	ZDHHC9
PCCA	PTEN	SLC25A22	TECR	ZEB2
PCDH19	PTPN11	SLC2A1	TGFBR1	ZFYVE26
PDHA1	PTS	SLC35A1	TGFBR2	ZNF335
PDSS1	PVRL1	SLC35A2	TIMM8A	ZNF423
PDSS2	QDPR	SLC35C1	TMEM138	ZNF711
PEPD	RAB18	SLC46A1	TMEM165	ZNF81
PEX1	RAB39B	SLC6A19	TMEM216	
PEX10	RAB3GAP1	SLC6A8	TMEM231	

Importnat Notes:

1- Only known exons of these genes will be examined

2- Repeat expansion disorders will not be covered

3- Genomic regions beside exons of protein-coding genes, genes that are not listed here in this list, repeat expansions and mutations in the upstream and downstream regulatory regions will not be investigated.

4- Additional Comments:

- **Although next generation sequencing (NGS) is a method of choice for high throughput sequencing purposes, NGS has not been approved for clinical and diagnostic use; therefore, Sanger sequencing must be done to confirm the sequencing data, particularly on identified mutations.**
- **Genetic counseling is recommended to explain risks and potential**

5- pitfalls of the experiment.

- **It is of utmost importance for all clinicians involved in the care of families requesting molecular genetic diagnostic tests and the families themselves to be aware of the risk of errors in DNA analysis. Incorrect analysis may result from 1) incorrect data and clinical diagnosis 2) incomplete family studies and history 3) mix-up of DNA samples and mislabeling 4) rare molecular events5) new or spontaneous mutations 6) paternity problems, adaptation, IVF, egg donor, bone marrow transplantation, recent blood product transfusion 7) maternal DNA contamination of CVS or amniotic fluid samples 8) technical errors. The risk of errors from various reasons mentioned above and several others is about 0.5%, while the chance of technical errors of all types is estimated to be around 0.5%. The risk of errors due to DNA recombination in diagnosis is approximately 0.3%. We take no responsibility about patient identity and possible mis-labeling of the DAN samples. Any feedback from our colleagues in the clinical field would be most welcomed. Comments can be given in writing or by calling my number listed below or by e-mail to: Mohammad.ali.faghihi@gmail.com**

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