

The detailed data are in supplement table1.

### Annotation of the 18 suspected variants

N O	Chr	Start	End	R ef	Al t	Func. refGene	Gene.re fGene	Exonic Func.re fGene	AAChange.refGene	OMIM phenotype	MAF gnomAD_ exome_A LL	REVEL	SIFT		Polyphen2	
													Score	Predit ion	Score	Predit ion
1	chr1 3	20797 486	207 974 86	C	G	exonic	GJB6	nonsynonymous SNV	GJB6:NM_001110221: exon3:c.G134C:p.G45A GJB6:NM_006783:exon3:c.G134C:p.G45A, GJB6:NM_001110220: exon4:c.G134C:p.G45A GJB6:NM_001110219: exon5:c.G134C:p.G45A	Name=Deafness; autosomal dominant 3B; 612643 ( 3 ) ; Autosomal dominant; Deafness; autosomal recessive 1B; 612645 ( 3 ) ; Autosomal recessive; Deafness; digenic GJB2/GJB6; 220290 ( 3 ) ; Autosomal recessive; Ectodermal dysplasia 2; Clouston type; 129500 ( 3 ) ;	0	0.861	0	D	1	D

										Autosomal dominant						
2	chr1 4	91779 741	917 797 41	G	A	exonic	CCDC8 8C	nonsyno nymous SNV	CCDC88C:NM_001080 414:exon15:c.C2419T:p .R807W	Name=Hydrocephalus; nonsyndromic; autosomal recessive; 236600 ( 3 ) ; Autosomal recessive; ?Spinocerebellar ataxia 40; 616053 ( 3 ) ; Autosomal dominant	0.0000168	0	0.01	D	0.776	P
3	chr1 4	55369 143	553 691 43	C	T	exonic	GCH1	nonsyno nymous SNV	GCH1:NM_000161:exo n1:c.G239A:p.S80N, GCH1:NM_001024024: exon1:c.G239A:p.S80N GCH1:NM_001024070: exon1:c.G239A:p.S80N GCH1:NM_001024071: exon1:c.G239A:p.S80N	Name=Dystonia; DOPA-responsive; with or without hyperphenylalaninemia; 128230 ( 3 ) ; Autosomal recessive; Autosomal dominant; Hyperphenylalaninemia; BH4-deficient; B; 233910 ( 3 ) ; Autosomal recessive	0.0000860	0	0.29	T	0.002	B

4	chr8	14522 3221	145 223 221	G	A	exonic	MROH1	nonsyno nymous SNV	MROH1:NM_0010992 81:exon3:c.G46A:p.A1 6T, MROH1:NM_0012888 14:exon3:c.G46A:p.A1 6T, MROH1:NM_0010992 80:exon4:c.G46A:p.A1 6T, MROH1:NM_032450:e xon4:c.G46A:p.A16T	Not record	0.0005	0	0.75	T	0.555	P
5	chr8	13979 3199	139 793 199	G	C	exonic	COL22 A1	nonsyno nymous SNV	COL22A1:NM_152888 :exon13:c.C1621G;p.P5 41A	Not record	0.0003	0	0.19	T	0.949	D
6	chr1 2	10972 5904	109 725	C	T	exonic	FOXN4	nonsyno nymous	FOXN4:NM_213596:e xon4:c.G314A:p.R105	Not record	0.0000141 5	0	0.35	T	0.001	B

			904					SNV	Q							
7	chr1 2	11043 7560	110 437 560	C	G	exonic	ANKR D13A	nonsyno nymous SNV	ANKRD13A:NM_0331 21:exon1:c.C67G;p.R23 G	Not record	0.0002	0	0.25	T	0.667	P
8	chr1 1	12577 5454	125 775 454	C	T	exonic	DDX25	nonsyno nymous SNV	DDX25:NM_013264:ex on3:c.C137T;p.S46F	Not record	0.0002	0	0.11	T	0.216	B
9	chr1 4	74995 691	749 956 91	C	T	exonic	LTBP2	nonsyno nymous SNV	LTBP2:NM_000428:ex on11:c.G2122A;p.E708 K	Name=Glaucoma 3; primary congenital; D; 613086 ( 3 ) ; 7 Microspherophakia and/or megalocornea; with ectopia lentis and with or without secondary glaucoma; 251750 ( 3 ) ; Autosomal recessive; ?Weill-Marchesani syndrome 3; recessive; 614819	0.0000841	0	0.9	T	0.001	B

										(3) ; Autosomal recessive						
10	chr1 4	88411 994	884 119 94	C	T	exonic	GALC	nonsynonymous SNV	GALC:NM_001201401 :exon13:c.G1504A:p.E502K, GALC:NM_000153:exon14:c.G1573A:p.E525K, GALC:NM_001201402 :exon14:c.G1495A:p.E499K	Name=Krabbe disease; 245200  (3) ; Autosomal recessive	0.0002	0	0.87	T	0.021	B
11	chr4	92456 71	924 567 1	T	C	exonic	USP17L 17	nonsynonymous SNV	USP17L17:NM_001256857:exon1:c.T67C:p.S23P	Not record	0.2839	0	0.25	T	0	Not available
12	chr2 2	37693 732	376 937 32	G	A	intronic	CYTH4	Not available	Not available	Not record	0.0002	0	0	Not available	0	Not available

13	chr1 4	60213 041	602 130 41	C	T	exonic	RTN1	nonsyno nymous SNV	RTN1:NM_021136:exon2:c.G400A:p.V134I	Not record	0.0000243 9	0	0.64	T	0.001	B
14	chr2 2	32003 941	320 039 41	G	A	exonic	SFI1	nonsyno nymous SNV	SFI1:NM_001258325:exon20:c.G2011A:p.E67 1K, SFI1:NM_001258326:exon20:c.G1930A:p.E64 4K, SFI1:NM_001258327:exon20:c.G1894A:p.E63 2K, SFI1:NM_014775:exon21:c.G2083A:p.E695K, SFI1:NM_001007467:exon22:c.G2176A:p.E72	Not record	0.0005	0	0.07	T	0.999	D

									6K							
15	chr1 2	12188 0596	121 880 596	T	C	exonic	KDM2B	nonsyno nymous SNV	KDM2B:NM_0010053 66:exon18:c.A2441G:p. N814S, KDM2B:NM_032590:c xon19:c.A2648G:p.N88 3S	Not record	0.0000119 3	0	0.44	T	0.002	B
16	chr1 4	55647 464	556 474 64	T	G	exonic	DLGAP 5	nonsyno nymous SNV	DLGAP5:NM_0011460 15:exon6:c.A613C:p.M 205L, DLGAP5:NM_014750: exon6:c.A613C:p.M205 L	Not record	0.0000812 1	0	0.68	T	0.001	B
17	chr1 8	12097 679	120 976 79	G	A	exonic	ANKR D62	nonsyno nymous SNV	ANKRD62:NM_00127 7333:exon5:c.G655A:p. V219I	Not record	0	0	1	T	0	Not availa ble

18	chr1	11213	112	C	T	exonic	ACAD1	stopgain	ACAD10:NM_0011365	Not record	0.0005	0	1	T	0	Not available
	2	0610	130 610				0		38:exon2:c.C97T:p.R33 X,ACAD10:NM_02524 7:exon2:c.C97T:p.R33 X							

Note: Func.refGene: The functional region of the reference gene where the variant is located; Gene.refGene: The name of the reference gene where the variant is located; ExonicFunc.refGene: Types of variants in exonic regions; Omim\_phenotype: The phenotype corresponding to the gene (not the variant) in the OMIM database; MAF\_gnomAD\_exome\_ALL: Minor Allele Frequency of each variant in Genome Aggregation Database; REVEL (Rare Exome Variant Ensemble Learner) : the predicted score range is 0-1; The SIFT (Sorting Intolerant From Tolerant) score range is 0-1, the position with score < 0.05 is predicted as harmful D: deleterious, and the position with score ≥ 0.05 is predicted as harmless T: tolerated; Polyphen2 (Polymorphism Phenotyping v2)\_Hvar prediction results D: potentially harmful, score ≥ 0.909, P: potentially harmful, score ≤ 0.447, B: benign.