Table S1: Disease states and phenotypes in which one associated SNP was found to alter the structural ensemble of the RNA.

Disease	Gene	HGMD Acc. #	UTR	UTR length	mutation	Corr. Coeff	P-value	pmid	reference	Motifs[1]	RBP[2] Binding	dbSNP[3] Ref. ID
Loss of protection against HIV infection	CCR5	CR084787	5	357	G310A	0.665	0.005	18094161	[1]	uORF, MBE 2X	-	-
Hirschprung Disease	RET	CR033995	5	190	G154C	0.617	0.018	14633923	[2]	-	ELAVL1, PABPC1	-
Change in Detoxification ability	GSTM4	CR040571	5	314	C30G	0.406	0.018	15128050	[3]	-	PABPC1, IGFBP2	rs1010167*
Epith. ovarian cancer, serous type, prot., assoc.	XRCC3	CR057423	5	380	A65G	0.601	0.022	15924337	[4]	IRES, uORF 2X	-	rs1799794*
Allergy, assoc. with	RNASE3	CR067512	3	179	G16C	0.789	0.024	16434694	[5]	PAS	-	rs2233860
Alzheimer disease, association with	BDNF	CR014434	5	346	C301T	0.851	0.035	11244490	[6]	IRES, uORF 2X	ELAVL1, PABPC1	rs56164415
Increased triglyceride levels, association with	ABCA1	CR025352	5	313	C35G	0.566	0.036	11940086	[7]	-	ELAVL1, PABPC1	-
Glaucoma, primary congenital	CYP1B1	CR032431	5	402	C118T	0.675	0.037	12598442	[8]	uORF	-	-
Reduced promoter activity, association with	AGRP	CR073538	5	300	G79A	0.585	0.052	17180153	[9]	-	ELAVL1	rs34018897
Myocardial infarction, association with	THPO	CR014438	3	528	G35A	0.867	0.053	11257273	[10]	IRES, K-BOX, uORF	-	rs6141*
Parkinson disease, autosomal recessive	PARK2	CR024270	5	134	G114T	0.504	0.067	11971093	[11]	-	ELAVL1	-
Hypercholesterolaemia	LDLR	CR973644	5	168	C23A	0.745	0.083	9259195	[12]	uORF	-	-
Increased LDL cholesterol, association with	PPARD	CR035869	5	309	C223T	0.804	0.085	12615676	[13]	uORF 2X	ELAVL1	rs2016520*
Cowden's disease	PTEN	CR032089	5	1032	G268A	0.867	0.087	12844284	[14]	uORF,GYBOX,TOP	-	-
Eosinophilic oesophagitis, association with	CCL26	CR066323	3	169	T13G	0.679	0.097	16453027	[15]	IRES, PAS	ELAVL1, PABPC1	rs2302009*
Alleviation of zellweger syndrome	PEX1	CR053503	5	96	C44G	0.818	0.097	16088892	[16]	IRES	ELAVL1	rs12386703*

[1]Structural and sequence motifs identified in mRNA UTRs using UTRScan[17].
[2]RNA Binding Protein as determined by RIP-chip[18].
[3]dbSNP reference IDs for common variants. A star (*) indicates LD data is available and reported in Supplementary Figure S6.

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