

Supplementary Table 2. Results of evaluation of 39 genes in Table 1 for overrepresentation in biological processes using the PANTHER database.

Analysis Type:	PANTHER Overrepresentation Test (Released 20220202)						
Annotation Version and Release Date:	GO Ontology database DOI: 10.5281/zenodo.5725227 Released 2021-11-16						
Analyzed List:	Client Text Box Input (Homo sapiens)						
Reference List:	Homo sapiens (all genes in database)						
Test Type:	FISHER						
Correction:	FDR						

GO biological process complete	Homo sapiens - REFLIST (20595)	Client Text Box Input (39)	Client Text Box Input (expected)	Client Text Box Input (over/under)	Client Text Box Input (fold Enrichment)	Client Text Box Input (raw P-value)	Client Text Box Input (FDR)
spliceosomal tri-snRNP complex assembly (GO:0000244)	13	3	0.02	+	> 100	3.44E-06	4.90E-03
spliceosomal snRNP assembly (GO:0000387)	37	3	0.07	+	42.82	5.88E-05	3.29E-02
spliceosomal snRNP assembly (GO:0000387)	218	11	0.41	+	26.65	3.15E-13	4.94E-09
sensory perception of light stimulus (GO:0050953)	221	11	0.42	+	26.28	3.64E-13	2.85E-09
eye morphogenesis (GO:0048592)	153	5	0.29	+	17.26	1.15E-05	8.60E-03
camera-type eye morphogenesis (GO:0048593)	125	4	0.24	+	16.9	1.01E-04	4.67E-02
sensory organ morphogenesis (GO:0090596)	271	7	0.51	+	13.64	7.95E-07	1.56E-03
mRNA splicing, via spliceosome (GO:0000398)	234	5	0.44	+	11.28	8.35E-05	4.22E-02

RNA splicing, via transesterification reactions with bulged adenosine as nucleophile (GO:0000377)	234	5	0.44	+		11.28	8.35E-05	4.09E-02
RNA splicing, via transesterification reactions (GO:0000375)	238	5	0.45	+		11.09	9.03E-05	4.29E-02
visual system development (GO:0150063)	375	7	0.71	+		9.86	6.51E-06	6.80E-03
camera-type eye development (GO:0043010)	324	6	0.61	+		9.78	3.34E-05	2.02E-02
sensory system development (GO:0048880)	381	7	0.72	+		9.7	7.21E-06	7.06E-03
eye development (GO:0001654)	371	6	0.7	+		8.54	7.01E-05	3.66E-02
sensory organ development (GO:0007423)	569	8	1.08	+		7.42	1.02E-05	7.99E-03
sensory perception (GO:0007600)	979	12	1.85	+		6.47	1.65E-07	4.32E-04
protein-containing complex assembly (GO:0065003)	1201	11	2.27	+		4.84	1.00E-05	8.25E-03
nervous system process (GO:0050877)	1434	12	2.72	+		4.42	8.85E-06	8.16E-03
cellular protein localization (GO:0034613)	1335	11	2.53	+		4.35	2.67E-05	1.82E-02
cellular component assembly (GO:0022607)	2320	19	4.39	+		4.32	7.33E-09	3.83E-05
cellular macromolecule localization (GO:0070727)	1345	11	2.55	+		4.32	2.87E-05	1.80E-02
protein-containing complex subunit organization (GO:0043933)	1372	11	2.6	+		4.23	3.44E-05	2.00E-02
cellular component biogenesis (GO:0044085)	2552	19	4.83	+		3.93	3.50E-08	1.37E-04
macromolecule localization (GO:0033036)	2289	15	4.33	+		3.46	9.16E-06	7.98E-03
anatomical structure morphogenesis (GO:0009653)	2180	14	4.13	+		3.39	2.60E-05	1.85E-02
nervous system development (GO:0007399)	2195	14	4.16	+		3.37	2.81E-05	1.83E-02
system process (GO:0003008)	2056	13	3.89	+		3.34	6.62E-05	3.58E-02

system development (GO:0048731)	4222	21	8	+		2.63	4.57E-06	5.52E-03
multicellular organism development (GO:0007275)	4564	22	8.64	+		2.55	3.74E-06	4.88E-03
cellular component organization (GO:0016043)	5314	25	10.06	+		2.48	5.71E-07	1.28E-03
anatomical structure development (GO:0048856)	5062	23	9.59	+		2.4	5.17E-06	5.79E-03
cellular component organization or biogenesis (GO:0071840)	5517	25	10.45	+		2.39	1.22E-06	2.12E-03
developmental process (GO:0032502)	5613	25	10.63	+		2.35	1.72E-06	2.70E-03
multicellular organismal process (GO:0032501)	6635	29	12.56	+		2.31	8.62E-08	2.70E-04