

Supplementary material

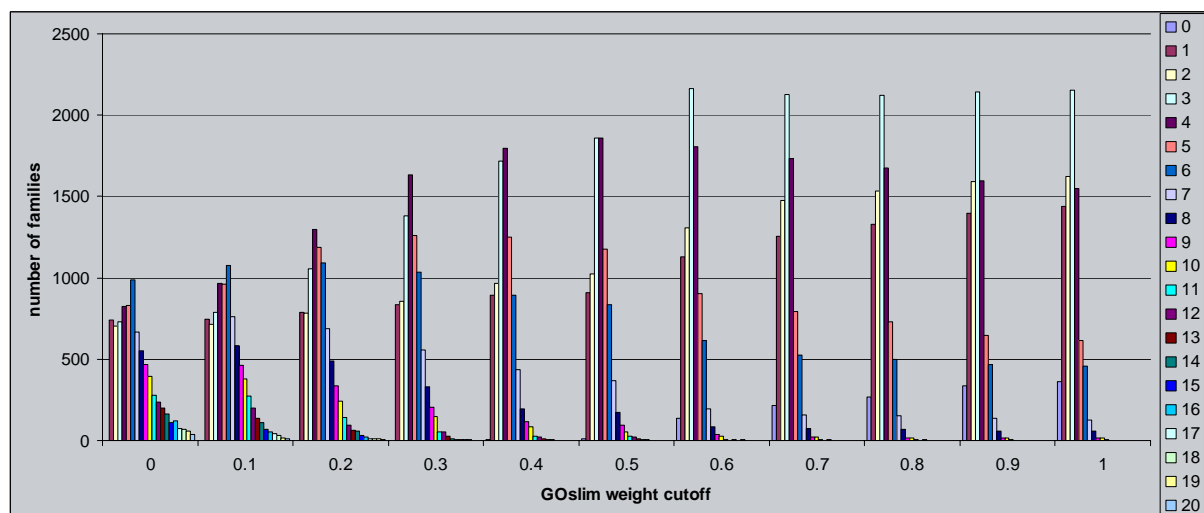
Setting the weight cut-off in the labelling of gene families with GOslim annotation

In a first step, all GOslim labels were collected for all genes in the families. The labels were subdivided by functional category (molecular function - MF, biological process - BP, cellular component - CC). The cellular component labels were discarded. For each label, a weight was calculated: the number of genes with the GOslim label in the family was divided by the number of genes with GOslim annotation within the functional category (e.g. molecular function) of the GOslim label. Subsequently, a minimum weight was used in order to avoid that gene families were annotated by rare labels. Figure S1 shows several possible weight cut-off values in the abscis. The plots show how many gene labels were appointed to the family. The values on the ordinate show the frequency (number of gene families) of that number of gene labels.

Figure S1 shows that if the cut-off value increases, the amount of gene families with many GOslim labels decreases (the peaks get sharper and go to the left).

Finally, it was decided to choose cut-off value 0.3, since this is the first weight cut-off without the strong tail on the right side of the peak, and without any family without GOslim annotation (the blue bar 0 is absent).

Figure S1. Comparison between different weight cut-off values in the functional annotation of gene families



Supplementary tables

Table S1. Significant trends in the total amount of duplicate pairs in the vertebrate genomes

The total amount of retained duplicates in the genome for a particular function was compared between all organisms, and significant results are listed. The genome (human - HS, mouse - MM, rat - RN, chicken - GG, frog - XT, zebrafish - DR, *Tetraodon* - TN), with the significantly higher amount of duplicates is given in the fifth column.

points	GOlabel	subtype	description	highest	p-value	q-value
HS versus DR	GO:0003824	MF	catalytic activity	DR	4.02E-06	0.000362
HS versus DR	GO:0006810	BP	transport	HS	0.000762	0.034283
RN versus DR	GO:0008233	MF	peptidase activity	RN	0.003331	0.041688
RN versus DR	GO:0003824	MF	catalytic activity	DR	8.59E-07	7.73E-05
RN versus DR	GO:0005488	MF	binding	RN	0.001509	0.041688
RN versus DR	GO:0005216	MF	ion channel activity	RN	0.005095	0.041688
RN versus DR	GO:0019538	BP	protein metabolism	RN	0.007502	0.048229
RN versus DR	GO:0006629	BP	lipid metabolism	RN	0.003545	0.041688
RN versus DR	GO:0006810	BP	transport	RN	0.000118	0.005316
RN versus DR	GO:0006464	BP	protein modification	RN	0.006808	0.048229
RN versus DR	GO:0006259	BP	DNA metabolism	RN	0.007069	0.048229
RN versus DR	GO:0005515	MF	protein binding	RN	0.003525	0.041688
RN versus DR	GO:0007582	BP	physiological process	RN	0.004757	0.041688
RN versus DR	GO:0007010	BP	cytoskeleton organization and biogenesis	RN	0.004819	0.041688
RN versus DR	GO:0005215	MF	transporter activity	RN	0.004672	0.041688
RN versus DR	GO:0009056	BP	catabolism	RN	0.003757	0.041688
MM versus DR	GO:0008233	MF	peptidase activity	MM	0.000462	0.008351
MM versus DR	GO:0003824	MF	catalytic activity	DR	2.03E-07	1.83E-05
MM versus DR	GO:0005488	MF	binding	MM	0.005093	0.044283
MM versus DR	GO:0019538	BP	protein metabolism	MM	0.000452	0.008351
MM versus DR	GO:0006629	BP	lipid metabolism	MM	0.003798	0.042725
MM versus DR	GO:0006810	BP	transport	MM	0.000464	0.008351
MM versus DR	GO:0006464	BP	protein modification	MM	0.003279	0.042162
MM versus DR	GO:0005515	MF	protein binding	MM	0.004341	0.043409
MM versus DR	GO:0005215	MF	transporter activity	MM	0.003033	0.042162
MM versus DR	GO:0006811	BP	ion transport	MM	0.005412	0.044283
MM versus DR	GO:0009056	BP	catabolism	MM	0.000439	0.008351
MM versus TN	GO:0008233	MF	peptidase activity	MM	0.000548	0.024664
MM versus TN	GO:0003824	MF	catalytic activity	TN	0.000904	0.027113
MM versus TN	GO:0019538	BP	protein metabolism	MM	8.43E-05	0.007587
GG versus DR	GO:0003824	MF	catalytic activity	DR	1.36E-05	0.001224
GG versus DR	GO:0005216	MF	ion channel activity	GG	0.002726	0.049063

GG versus DR	GO:000166	MF	nucleotide binding	GG	0.001225	0.028486
GG versus DR	GO:0006810	BP	transport	GG	3.58E-05	0.001613
GG versus DR	GO:0006464	BP	protein modification	GG	0.001266	0.028486
XT versus DR	GO:0008233	MF	peptidase activity	XT	0.002871	0.043063
XT versus DR	GO:0003824	MF	catalytic activity	DR	3.67E-05	0.00165
XT versus DR	GO:0005488	MF	binding	XT	0.000161	0.004815
XT versus DR	GO:0019538	BP	protein metabolism	XT	0.000419	0.00942
XT versus DR	GO:0006810	BP	transport	XT	0.001666	0.029989
XT versus DR	GO:0009056	BP	catabolism	XT	2.15E-05	0.00165
XT versus TN	GO:0019538	BP	protein metabolism	XT	8.05E-05	0.007249
XT versus TN	GO:0009056	BP	catabolism	XT	0.000278	0.012502

Table S2. Excess of gene retention in parts of the vertebrate tree.

The GOslim label, its category (molecular function and biological process) and the general description are shown. For each organism, the number of species-specific duplicates was compared to the number of duplicates from time points coinciding with WGDs (TP12 and TP13). For the species-specific duplications, the number of genes that were duplicated in a terminal branch was compared to the number of genes of that species in the same tree topology, but without species-specific duplication. For the time points coinciding with WGDs, the number of retained duplicate pairs after these duplications was compared to an estimation (based on tree topology) of the number of genes that were duplicated, but not retained.

The time points that were significantly different ($q < 0.05$) in comparison are shown (TPx vs TPy), followed by the time point with the highest number of duplicates. The last column shows the q-value. Only discussed significant results were listed in Table 2, this table shows all results.

GO:0008233	MF	peptidase activity	
RN	TP13 vs TP2	TP13	9.82E-03
MM	TP13 vs TP3	TP13	1.08E-02
DR	TP12 vs TP10	TP10	2.48E-05
DR	TP13 vs TP10	TP10	5.55E-08
GO:0003774	MF	motor activity	
RN	TP13 vs TP2	TP13	1.28E-02
MM	TP13 vs TP3	TP13	1.25E-02
GO:0006118	BP	electron transport	
HS	TP13 vs TP1	TP1	6.73E-05
DR	TP12 vs TP10	TP10	2.50E-04
DR	TP13 vs TP10	TP10	8.60E-06
GO:0009058	BP	biosynthesis	
RN	TP13 vs TP2	TP13	4.03E-03
MM	TP13 vs TP3	TP13	1.73E-02
HS	TP13 vs TP1	TP1	2.43E-02
DR	TP12 vs TP10	TP10	1.29E-05
DR	TP13 vs TP10	TP10	1.34E-08

GO:0004672	MF		protein kinase activity
RN	TP13 vs TP2	TP13	7.43E-05
MM	TP13 vs TP3	TP13	1.32E-03
HS	TP13 vs TP1	TP13	6.20E-03
DR	TP12 vs TP10	TP10	5.55E-04
DR	TP13 vs TP10	TP10	7.28E-03
GO:0007028	BP		cytoplasm organization and biogenesis
DR	TP13 vs TP10	TP10	1.15E-04
GO:0004871	MF		signal transducer activity
RN	TP13 vs TP2	TP13	2.69E-03
MM	TP13 vs TP3	TP13	1.90E-04
DR	TP12 vs TP10	TP10	5.37E-04
DR	TP13 vs TP10	TP10	2.11E-03
GO:0015031	BP		protein transport
MM	TP13 vs TP3	TP13	3.72E-03
DR	TP12 vs TP10	TP10	5.34E-04
DR	TP13 vs TP10	TP10	7.68E-04
GO:0006519	BP		amino acid and derivative metabolism
HS	TP13 vs TP1	TP1	8.69E-04
DR	TP12 vs TP10	TP10	5.37E-04
DR	TP13 vs TP10	TP10	1.47E-08
GO:0009607	BP		response to biotic stimulus
XT	TP13 vs TP8	TP8	4.38E-02
HS	TP13 vs TP1	TP1	2.43E-02
DR	TP13 vs TP10	TP10	9.03E-03
GO:0007610	BP		behavior
RN	TP13 vs TP2	TP13	2.73E-03
MM	TP13 vs TP3	TP13	2.98E-04
DR	TP12 vs TP10	TP10	3.19E-02
GO:0009605	BP		response to external stimulus
MM	TP13 vs TP3	TP13	1.45E-02
DR	TP12 vs TP10	TP10	1.41E-02
DR	TP13 vs TP10	TP10	9.15E-04
GO:0007165	BP		signal transduction
TN	TP13 vs TP11	TP13	5.76E-04
XT	TP13 vs TP8	TP13	9.18E-04
RN	TP13 vs TP2	TP13	1.44E-17
MM	TP13 vs TP3	TP13	8.32E-19
HS	TP13 vs TP1	TP13	2.43E-02
DR	TP12 vs TP10	TP10	3.60E-16
DR	TP13 vs TP10	TP10	6.40E-12
GO:0008152	BP		metabolism
RN	TP13 vs TP2	TP13	1.20E-03
MM	TP13 vs TP3	TP13	8.18E-03
HS	TP13 vs TP1	TP1	8.69E-04
DR	TP12 vs TP10	TP10	1.25E-08
DR	TP13 vs TP10	TP10	5.01E-15
GO:0008092	MF		cytoskeletal protein binding
RN	TP13 vs TP2	TP13	4.09E-02
DR	TP12 vs TP10	TP10	2.88E-02
DR	TP13 vs TP10	TP10	3.66E-02
GO:0006091	BP		generation of precursor metabolites and energy
DR	TP12 vs TP10	TP10	3.19E-02
DR	TP13 vs TP10	TP10	9.07E-06

GO:0007154	BP		cell communication
RN	TP13 vs TP2	TP13	9.13E-06
MM	TP13 vs TP3	TP13	5.21E-06
HS	TP13 vs TP1	TP13	2.08E-02
DR	TP12 vs TP10	TP10	1.92E-04
DR	TP13 vs TP10	TP10	3.44E-04
GO:0003824	MF		catalytic activity
RN	TP13 vs TP2	TP13	6.24E-08
MM	TP13 vs TP3	TP13	6.47E-10
HS	TP13 vs TP1	TP1	2.78E-04
DR	TP12 vs TP10	TP10	9.00E-29
DR	TP13 vs TP10	TP10	3.34E-53
GO:0005488	MF		binding
TN	TP13 vs TP11	TP13	2.55E-02
XT	TP13 vs TP8	TP13	3.05E-02
RN	TP13 vs TP2	TP13	6.25E-09
MM	TP13 vs TP3	TP13	3.01E-09
DR	TP12 vs TP10	TP10	3.65E-13
DR	TP13 vs TP10	TP10	6.12E-13
GO:0009719	BP		response to endogenous stimulus
HS	TP13 vs TP1	TP1	3.70E-02
DR	TP13 vs TP10	TP10	1.00E-02
GO:0005216	MF		ion channel activity
TN	TP13 vs TP11	TP13	2.03E-02
RN	TP13 vs TP2	TP13	9.03E-10
MM	TP13 vs TP3	TP13	3.68E-05
DR	TP12 vs TP10	TP10	3.92E-02
GO:0019538	BP		protein metabolism
RN	TP13 vs TP2	TP13	8.34E-06
MM	TP13 vs TP3	TP13	1.99E-05
HS	TP13 vs TP1	TP1	2.08E-02
DR	TP12 vs TP10	TP10	1.25E-08
DR	TP13 vs TP10	TP10	4.77E-13
GO:0009790	BP		embryonic development
MM	TP13 vs TP3	TP13	4.96E-02
GO:0006412	BP		protein biosynthesis
HS	TP13 vs TP1	TP1	2.78E-04
DR	TP12 vs TP10	TP10	4.54E-05
DR	TP13 vs TP10	TP10	2.49E-10
GO:0006629	BP		lipid metabolism
RN	TP13 vs TP2	TP13	2.05E-03
MM	TP13 vs TP3	TP13	2.99E-02
DR	TP12 vs TP10	TP10	8.98E-03
DR	TP13 vs TP10	TP10	5.98E-03
GO:0003677	MF		DNA binding
XT	TP13 vs TP8	TP13	4.38E-02
RN	TP13 vs TP2	TP13	1.20E-08
MM	TP13 vs TP3	TP13	1.86E-07
DR	TP12 vs TP10	TP10	1.51E-10
DR	TP13 vs TP10	TP10	3.99E-10
GO:0030528	MF		transcription regulator activity
DR	TP12 vs TP10	TP10	4.43E-03
DR	TP13 vs TP10	TP10	1.65E-02
GO:0016049	BP		cell growth
MM	TP13 vs TP3	TP13	4.62E-02

DR	TP12 vs TP10	TP10	1.28E-03
DR	TP13 vs TP10	TP10	1.80E-02
GO:0003674	MF	molecular_function	
DR	TP13 vs TP10	TP10	2.99E-02
GO:0000166	MF	nucleotide binding	
RN	TP13 vs TP2	TP13	2.26E-11
MM	TP13 vs TP3	TP13	3.82E-11
DR	TP12 vs TP10	TP10	3.45E-11
DR	TP13 vs TP10	TP10	6.45E-15
GO:0005975	BP	carbohydrate metabolism	
RN	TP13 vs TP2	TP13	3.51E-02
MM	TP13 vs TP3	TP13	9.49E-03
HS	TP13 vs TP1	TP1	2.78E-02
DR	TP12 vs TP10	TP10	6.66E-05
DR	TP13 vs TP10	TP10	1.36E-07
GO:0006810	BP	transport	
TN	TP13 vs TP11	TP13	2.22E-02
RN	TP13 vs TP2	TP13	1.51E-11
MM	TP13 vs TP3	TP13	1.28E-10
DR	TP12 vs TP10	TP10	1.18E-06
DR	TP13 vs TP10	TP10	5.92E-07
GO:0008135	MF	translation factor activity, nucleic acid binding	
HS	TP13 vs TP1	TP1	1.74E-02
GO:0004872	MF	receptor activity	
TN	TP13 vs TP11	TP13	6.34E-03
XT	TP13 vs TP8	TP13	5.83E-03
RN	TP13 vs TP2	TP13	2.26E-11
MM	TP13 vs TP3	TP13	7.47E-09
DR	TP12 vs TP10	TP10	1.01E-08
DR	TP13 vs TP10	TP10	7.37E-05
GO:0030234	MF	enzyme regulator activity	
TN	TP13 vs TP11	TP13	2.03E-02
RN	TP13 vs TP2	TP13	6.64E-06
MM	TP13 vs TP3	TP13	1.33E-03
DR	TP12 vs TP10	TP10	4.57E-03
DR	TP13 vs TP10	TP10	4.44E-04
GO:0007267	BP	cell-cell signaling	
RN	TP13 vs TP2	TP13	9.15E-05
MM	TP13 vs TP3	TP13	5.06E-04
DR	TP12 vs TP10	TP10	6.51E-03
DR	TP13 vs TP10	TP10	3.03E-03
GO:0003676	MF	nucleic acid binding	
RN	TP13 vs TP2	TP13	6.83E-04
MM	TP13 vs TP3	TP13	1.99E-03
HS	TP13 vs TP1	TP1	2.08E-02
DR	TP12 vs TP10	TP10	4.69E-10
DR	TP13 vs TP10	TP10	1.65E-09
GO:0003779	MF	actin binding	
TN	TP13 vs TP11	TP13	1.97E-02
RN	TP13 vs TP2	TP13	2.46E-02
MM	TP13 vs TP3	TP13	3.52E-02
GO:0006464	BP	protein modification	
RN	TP13 vs TP2	TP13	8.16E-12
MM	TP13 vs TP3	TP13	7.26E-07
HS	TP13 vs TP1	TP13	2.43E-02
DR	TP12 vs TP10	TP10	1.00E-09

	DR	TP13 vs TP10	TP10	2.63E-07
GO:0005509	MF			calcium ion binding
	TN	TP13 vs TP11	TP13	4.93E-02
	RN	TP13 vs TP2	TP13	9.03E-10
	MM	TP13 vs TP3	TP13	1.13E-06
	DR	TP12 vs TP10	TP10	5.37E-04
	DR	TP13 vs TP10	TP10	1.87E-04
GO:0005198	MF			structural molecule activity
	RN	TP13 vs TP2	TP13	4.11E-02
	HS	TP13 vs TP1	TP1	1.65E-03
	DR	TP12 vs TP10	TP10	9.70E-05
	DR	TP13 vs TP10	TP10	1.15E-10
GO:0000003	BP			reproduction
	RN	TP13 vs TP2	TP13	4.40E-03
	DR	TP12 vs TP10	TP10	4.46E-02
	DR	TP13 vs TP10	TP10	1.90E-02
GO:0005102	MF			receptor binding
	RN	TP13 vs TP2	TP13	1.56E-02
	MM	TP13 vs TP3	TP13	1.25E-02
	DR	TP12 vs TP10	TP10	2.33E-05
	DR	TP13 vs TP10	TP10	4.12E-05
GO:0006259	BP			DNA metabolism
	RN	TP13 vs TP2	TP13	3.51E-02
	MM	TP13 vs TP3	TP13	1.38E-02
	DR	TP12 vs TP10	TP10	3.28E-03
	DR	TP13 vs TP10	TP10	1.11E-06
GO:0009628	BP			response to abiotic stimulus
	RN	TP13 vs TP2	TP13	1.13E-02
	MM	TP13 vs TP3	TP13	2.53E-03
	DR	TP12 vs TP10	TP10	4.34E-02
	DR	TP13 vs TP10	TP10	1.66E-02
GO:0000004	BP			biological_process unknown
	RN	TP13 vs TP2	TP13	1.19E-02
	DR	TP12 vs TP10	TP10	1.81E-04
	DR	TP13 vs TP10	TP10	1.15E-03
GO:0005515	MF			protein binding
	TN	TP13 vs TP11	TP13	5.76E-04
	XT	TP13 vs TP8	TP13	1.01E-02
	RN	TP13 vs TP2	TP13	2.31E-12
	MM	TP13 vs TP3	TP13	3.72E-08
	DR	TP12 vs TP10	TP10	7.78E-07
	DR	TP13 vs TP10	TP10	4.01E-06
GO:0016787	MF			hydrolase activity
	RN	TP13 vs TP2	TP13	9.22E-07
	MM	TP13 vs TP3	TP13	1.20E-06
	HS	TP13 vs TP1	TP1	1.74E-02
	DR	TP12 vs TP10	TP10	5.12E-06
	DR	TP13 vs TP10	TP10	6.19E-13
GO:0004721	MF			phosphoprotein phosphatase activity
	RN	TP13 vs TP2	TP13	6.83E-04
	MM	TP13 vs TP3	TP13	1.64E-02
	DR	TP12 vs TP10	TP10	2.26E-03
GO:0003700	MF			transcription factor activity
	RN	TP13 vs TP2	TP13	1.33E-06
	MM	TP13 vs TP3	TP13	1.38E-07
	DR	TP12 vs TP10	TP10	6.64E-11

DR	TP13 vs TP10	TP10	1.05E-03
GO:0007582	BP	physiological process	
RN	TP13 vs TP2	TP13	2.46E-10
MM	TP13 vs TP3	TP13	5.69E-09
DR	TP12 vs TP10	TP10	1.78E-04
DR	TP13 vs TP10	TP10	5.07E-05
GO:0009653	BP	morphogenesis	
RN	TP13 vs TP2	TP13	4.42E-05
MM	TP13 vs TP3	TP13	5.55E-07
DR	TP12 vs TP10	TP10	5.96E-06
DR	TP13 vs TP10	TP10	4.01E-06
GO:0030154	BP	cell differentiation	
RN	TP13 vs TP2	TP13	3.51E-02
GO:0016301	MF	kinase activity	
DR	TP12 vs TP10	TP10	5.94E-05
DR	TP13 vs TP10	TP10	1.22E-05
GO:0006139	BP	nucleobase\, nucleoside\, nucleotide and nucleic acid metabolism	
MM	TP13 vs TP3	TP13	1.58E-02
HS	TP13 vs TP1	TP1	1.41E-02
DR	TP12 vs TP10	TP10	2.77E-06
DR	TP13 vs TP10	TP10	6.07E-12
GO:0007275	BP	development	
TN	TP13 vs TP11	TP13	3.71E-02
XT	TP13 vs TP8	TP13	4.50E-02
RN	TP13 vs TP2	TP13	7.64E-08
MM	TP13 vs TP3	TP13	1.49E-06
HS	TP13 vs TP1	TP13	1.88E-02
DR	TP12 vs TP10	TP10	1.18E-06
DR	TP13 vs TP10	TP10	1.06E-03
GO:0006350	BP	transcription	
TN	TP13 vs TP11	TP13	1.97E-02
RN	TP13 vs TP2	TP13	7.13E-11
MM	TP13 vs TP3	TP13	3.82E-11
DR	TP12 vs TP10	TP10	1.54E-20
DR	TP13 vs TP10	TP10	4.11E-11
GO:0007010	BP	cytoskeleton organization and biogenesis	
RN	TP13 vs TP2	TP13	7.43E-05
MM	TP13 vs TP3	TP13	3.47E-04
DR	TP12 vs TP10	TP10	2.66E-02
DR	TP13 vs TP10	TP10	6.36E-03
GO:0016740	MF	transferase activity	
RN	TP13 vs TP2	TP13	3.51E-02
MM	TP13 vs TP3	TP13	1.31E-03
HS	TP13 vs TP1	TP1	5.96E-03
DR	TP12 vs TP10	TP10	1.25E-10
DR	TP13 vs TP10	TP10	2.75E-19
GO:0005215	MF	transporter activity	
RN	TP13 vs TP2	TP13	1.63E-06
MM	TP13 vs TP3	TP13	9.86E-05
DR	TP12 vs TP10	TP10	8.93E-04
DR	TP13 vs TP10	TP10	1.65E-08
GO:0003723	MF	RNA binding	
RN	TP13 vs TP2	TP2	4.71E-02
HS	TP13 vs TP1	TP1	9.08E-03

DR	TP12 vs TP10	TP10	9.36E-04
DR	TP13 vs TP10	TP10	3.42E-05
GO:0006950	BP	response to stress	
RN	TP13 vs TP2	TP13	6.83E-04
MM	TP13 vs TP3	TP13	1.84E-02
HS	TP13 vs TP1	TP1	2.43E-02
DR	TP12 vs TP10	TP10	2.00E-02
DR	TP13 vs TP10	TP10	9.92E-07
GO:0005489	MF	electron transporter activity	
HS	TP13 vs TP1	TP1	8.69E-04
DR	TP13 vs TP10	TP10	5.03E-04
GO:0008283	BP	cell proliferation	
MM	TP13 vs TP3	TP13	2.02E-02
DR	TP12 vs TP10	TP10	3.34E-04
DR	TP13 vs TP10	TP10	1.15E-03
GO:0040029	BP	regulation of gene expression\, epigenetic	
DR	TP13 vs TP10	TP10	2.22E-02
GO:0008219	BP	cell death	
MM	TP13 vs TP3	TP13	2.56E-02
DR	TP12 vs TP10	TP10	1.23E-02
DR	TP13 vs TP10	TP10	2.03E-04
GO:0006996	BP	organelle organization and biogenesis	
RN	TP13 vs TP2	TP13	4.61E-02
DR	TP12 vs TP10	TP10	1.19E-04
DR	TP13 vs TP10	TP10	1.57E-08
GO:0006811	BP	ion transport	
TN	TP13 vs TP11	TP13	1.11E-02
XT	TP13 vs TP8	TP13	1.79E-02
RN	TP13 vs TP2	TP13	1.23E-11
MM	TP13 vs TP3	TP13	1.34E-06
HS	TP13 vs TP1	TP13	3.84E-02
DR	TP12 vs TP10	TP10	8.52E-03
DR	TP13 vs TP10	TP10	1.00E-02
GO:0030246	MF	carbohydrate binding	
HS	TP13 vs TP1	TP1	1.56E-02
DR	TP13 vs TP10	TP10	3.01E-02
GO:0005554	MF	molecular_function unknown	
DR	TP12 vs TP10	TP10	4.01E-04
DR	TP13 vs TP10	TP10	2.33E-04
GO:0009056	BP	catabolism	
RN	TP13 vs TP2	TP13	1.84E-03
MM	TP13 vs TP3	TP13	2.24E-04
HS	TP13 vs TP1	TP1	1.74E-02
DR	TP12 vs TP10	TP10	8.79E-08
DR	TP13 vs TP10	TP10	6.94E-13
GO:0007049	BP	cell cycle	
RN	TP13 vs TP2	TP13	1.79E-04
MM	TP13 vs TP3	TP13	8.07E-03
DR	TP12 vs TP10	TP10	2.48E-05
DR	TP13 vs TP10	TP10	1.42E-06