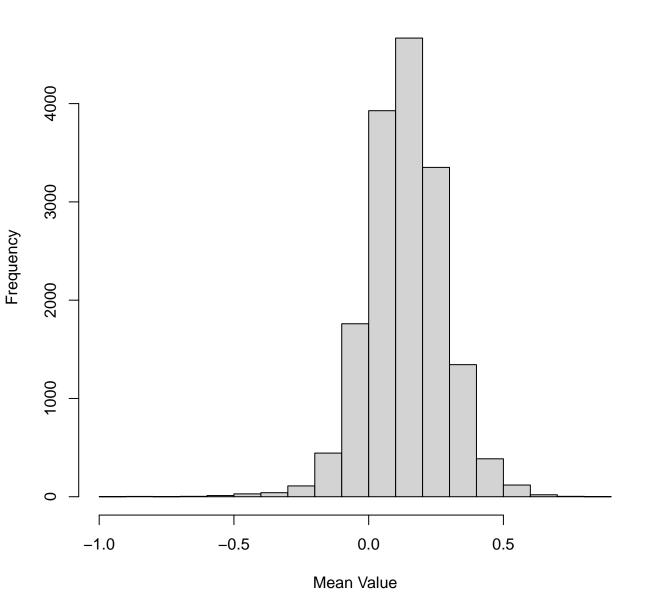
## Mean Biodomain-Kegg Intersection Expression



Met	abolic	pathw	/ays

		and and parint	, .	
-0.00753	-0.0177	-0.0599	0.0924	-0.0568
0.0834	0.206	0.255	0.0989	0.108
0.0642	0.119	0.0586	0.144	-0.00226
0.0389	0.0249	0.0285	0.113	-0.00835
0.019	0.102	0.0955	0.088	-0.00116
0.018	0.0206	0.053	-0.0409	-0.0479
0.0586	0.0889	0.108	0.104	0.0639
0.0533	0.124	0.0927	0.107	0.0439
0.0366	0.0663	0.0414	0.058	0.00777
0.00463	-0.0254	-0.14	0.126	-0.119
-0.0558	0.284	-0.00492	0.0565	0.151
0.0112	0.00346	-0.111	0.147	-0.0148
0.0662	0.142	0.122	0.123	0.0761
0.0513	0.0651	0.112	0.0786	0.0672
0.0617	0.173	0.174	0.102	0.0686
-0.000841	-0.00125	0.0562	0.11	0.0352
WT/WT	WT/FC	FC/FC	WT/VS	VS/VS
	0.0834 0.0642 0.0389 0.019 0.018 0.0586 0.0533 0.0366 0.00463 -0.0558 0.0112 0.0662 0.0513 0.0617	0.0834       0.206         0.0642       0.119         0.0389       0.0249         0.019       0.102         0.018       0.0206         0.0586       0.0889         0.0533       0.124         0.0366       0.0663         0.00463       -0.0254         -0.0558       0.284         0.0112       0.00346         0.0662       0.142         0.0513       0.0651         0.0617       0.173	0.0834       0.206       0.255         0.0642       0.119       0.0586         0.0389       0.0249       0.0285         0.019       0.102       0.0955         0.018       0.0206       0.053         0.0586       0.0889       0.108         0.0533       0.124       0.0927         0.0366       0.0663       0.0414         0.00463       -0.0254       -0.14         -0.0558       0.284       -0.00492         0.0112       0.00346       -0.111         0.0662       0.142       0.122         0.0513       0.0651       0.112         0.0513       0.0651       0.112         0.0617       0.173       0.174	0.0834       0.206       0.255       0.0989         0.0642       0.119       0.0586       0.144         0.0389       0.0249       0.0285       0.113         0.019       0.102       0.0955       0.088         0.018       0.0206       0.053       -0.0409         0.0536       0.0889       0.108       0.104         0.0533       0.124       0.0927       0.107         0.0366       0.0663       0.0414       0.058         0.00463       -0.0254       -0.14       0.126         -0.0558       0.284       -0.00492       0.0565         0.0112       0.00346       -0.111       0.147         0.0662       0.142       0.122       0.123         0.0513       0.0651       0.112       0.0786         0.0617       0.173       0.174       0.102

	Carbon metabolism				
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response	0.0617	-0.0307	0.155	0.0605	-0.054
Lipid Metabolism	0.163	0.14	0.177	0.167	-0.115
Metal Binding and Homeostasis	0.14	0.123	0.0596	0.201	-0.028
Mitochondrial Metabolism	0.118	0.146	0.0501	0.206	-0.0431
Myelination					
Oxidative Stress					
Proteostasis	0.102	-0.0767	-0.113	0.252	-0.0563
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	2-Oxocarboxylic acid metabolism				
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis	0.133	0.14	0.0297	0.34	-0.0236
Mitochondrial Metabolism	0.0625	0.245	0.0613	0.227	0.0151
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Fatty acid metabolism				
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism	-0.0224	0.224	0.067	0.178	0.0929
Metal Binding and Homeostasis					
Mitochondrial Metabolism	0.000494	0.127	0.014	0.227	0.0794
Myelination					
Oxidative Stress					
Proteostasis	-0.0701	0.307	0.169	0.0853	0.183
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Biosynthesis of amino acids				
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response	-0.0515	-0.0698	-0.115	0.134	-0.0869
Lipid Metabolism	0.169	0.188	0.231	0.302	-0.0461
Metal Binding and Homeostasis	0.0911	0.0528	0.016	0.201	-0.0186
Mitochondrial Metabolism	0.224	0.145	0.146	0.329	0.0207
Myelination					
Oxidative Stress					
Proteostasis	0.123	-0.0548	-0.0511	0.383	0.0162
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Nucleotide metabolism				
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle	0.0755	0.0803	-0.0537	0.107	-0.0163
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response	0.0651	0.204	0.0922	0.202	-0.0646
Lipid Metabolism					
Metal Binding and Homeostasis	0.0459	-0.0314	-0.0675	0.0979	-0.0878
Mitochondrial Metabolism	0.0581	0.133	-0.139	0.0302	-0.131
Myelination					
Oxidative Stress					
Proteostasis	0.132	0.117	-0.019	0.147	0.14
RNA Spliceosome					
Structural Stabilization	0.222	0.0733	0.0895	0.172	0.265
Synapse					
Tau Homeostasis					
Vasculature					

WT/WT WT/FC FC/FC WT/VS

VS/VS

		Biosynthes	is of nucleot	ide sugars	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis					
Mitochondrial Metabolism	0.138	-0.071	0.0789	0.137	-0.028
Myelination					
Oxidative Stress					
Proteostasis	-0.00362	-0.0419	-0.051	0.0238	-0.0279
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

В	liosyn	ithesis	Of	CO.	tact	tors	

	Discounth spin of potagons						
	Biosynthesis of cofactors						
Apoptosis	0.193	0.134	-0.00111	0.228	0.0564		
APP Metabolism							
Autophagy							
Cell Cycle	0.165	0.14	0.107	0.328	0.0336		
DNA Repair							
Endolysosome							
Epigenetic							
Immune Response	0.102	0.189	0.0538	0.0526	0.0215		
Lipid Metabolism	0.0979	-0.00116	-0.102	0.0908	-0.0364		
Metal Binding and Homeostasis	0.0551	-0.0334	-0.0686	0.0866	-0.0472		
Mitochondrial Metabolism	0.0915	0.133	0.0312	0.204	0.0246		
Myelination							
Oxidative Stress	0.1	0.183	0.0158	0.0187	0.0766		
Proteostasis	-0.00564	-0.0597	-0.0182	-0.046	-0.156		
RNA Spliceosome							
Structural Stabilization	0.278	0.186	0.114	0.347	0.212		
Synapse	0.0764	0.0625	0.0508	0.0636	0.115		
Tau Homeostasis							
Vasculature							
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS		

	Glycolysis / Gluconeogenesis				
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism	0.113	0.032	0.0736	0.101	-0.201
Metal Binding and Homeostasis	0.298	0.144	0.137	0.353	-0.0452
Mitochondrial Metabolism	0.206	0.167	0.142	0.317	0.00828
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Citrate cycle (TCA cycle)				
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis	0.103	0.213	0.00599	0.288	-0.0849
Mitochondrial Metabolism	0.114	0.321	0.0326	0.303	-0.0727
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Pentose	phosphate	pathway	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis	0.273	0.24	0.265	0.242	0.167
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Fructose an	d mannose	metabolism	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis	0.347	-0.0287	0.208	0.0151	-0.0696
Mitochondrial Metabolism	0.154	0.00535	0.108	0.126	-0.055
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Galad	ctose metab	olism	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis					
Mitochondrial Metabolism	0.118	0.00526	0.227	0.224	-0.0481
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Starch and	d sucrose m	etabolism		
Apoptosis						
APP Metabolism						
Autophagy						
Cell Cycle						
DNA Repair						
Endolysosome						
Epigenetic						
Immune Response						
Lipid Metabolism						
Metal Binding and Homeostasis						
Mitochondrial Metabolism	0.145	0.114	0.191	0.223	-0.0751	
Myelination						
Oxidative Stress						
Proteostasis						
RNA Spliceosome						
Structural Stabilization						
Synapse						
Tau Homeostasis						
Vasculature						
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS	

	Amino	sugar and	nucleotide s	sugar metab	olism
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis	0.0299	0.0967	-0.107	-0.0165	-0.0207
Mitochondrial Metabolism	0.109	0.0153	0.143	0.199	0.0229
Myelination					
Oxidative Stress					
Proteostasis	0.0824	0.0641	0.0701	0.087	0.0202
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Pyru	vate metabo	olism	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism	0.151	0.157	0.0586	0.114	-0.146
Metal Binding and Homeostasis	0.126	0.0461	-0.0562	0.136	-0.101
Mitochondrial Metabolism	0.197	0.248	0.185	0.264	0.000314
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Gly	oxylate and	dicarboxyla	te metabolis	sm
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism	0.0468	-0.0166	-0.0298	0.0304	-0.276
Metal Binding and Homeostasis	-0.0894	-0.0392	-0.174	0.0183	-0.147
Mitochondrial Metabolism	-0.0444	0.0745	-0.0354	0.0412	-0.165
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Propai	noate metal	oolism	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism	-0.054	-0.023	-0.0198	0.1	-0.184
Metal Binding and Homeostasis					
Mitochondrial Metabolism	-0.0637	0.0738	0.00822	0.0625	-0.0934
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Butar	noate metab	olism	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism	0.157	0.361	0.187	0.193	0.026
Metal Binding and Homeostasis					
Mitochondrial Metabolism	0.0329	0.286	0.191	0.16	-0.0149
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Inositol p	hosphate me	etabolism	
Apoptosis					
APP Metabolism					
Autophagy	-0.101	0.152	0.21	-0.142	0.0759
Cell Cycle					
DNA Repair					
Endolysosome	-0.113	0.223	0.264	-0.189	0.142
Epigenetic					
Immune Response	-0.0289	0.0694	0.106	-0.0785	0.112
Lipid Metabolism	-0.0215	0.163	0.174	-0.0398	0.0257
Metal Binding and Homeostasis	-0.0521	0.0803	0.0476	0.0454	-0.0612
Mitochondrial Metabolism	-0.0952	0.0457	-0.0344	0.0222	-0.155
Myelination					
Oxidative Stress					
Proteostasis	-0.0768	0.0964	0.181	-0.0284	-0.0744
RNA Spliceosome					
Structural Stabilization	-0.09	-0.0344	0.0452	-0.138	-0.0309
Synapse	-0.0276	0.204	0.202	-0.0553	-0.0173
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Oxidative phosphorylation					
Apoptosis						
APP Metabolism						
Autophagy	0.152	0.242	0.231	0.183	0.0494	
Cell Cycle						
DNA Repair						
Endolysosome	0.107	0.172	0.098	0.161	-0.155	
Epigenetic						
Immune Response	0.328	0.308	0.319	0.459	0.0977	
Lipid Metabolism	-0.0282	-0.0318	-0.319	0.147	-0.341	
Metal Binding and Homeostasis	0.0258	-0.057	-0.315	0.103	-0.314	
Mitochondrial Metabolism	-0.221	-0.42	-0.631	-0.0792	-0.523	
Myelination						
Oxidative Stress	-0.355	-0.407	-0.757	-0.245	-0.428	
Proteostasis	0.247	0.1	-0.0257	0.231	-0.238	
RNA Spliceosome						
Structural Stabilization						
Synapse	0.156	0.281	0.153	0.0472	-0.0741	
Tau Homeostasis						
Vasculature						
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS	

		Nitro	gen metabo	olism	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis	-0.2	-0.0929	-0.292	0.0334	-0.109
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Fatty	acid biosynt	hesis	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism	0.0739	0.214	0.155	0.109	0.176
Metal Binding and Homeostasis					
Mitochondrial Metabolism	0.0144	0.135	0.0468	0.0122	0.133
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Fatty	acid elonga	ation	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism	-0.118	0.128	-0.0596	0.0625	0.0342
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	-0.301	0.218	-0.0597	-0.0849	0.0212
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Fatty	acid degrad	lation	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism	-0.0537	0.119	-0.035	0.161	-0.0541
Metal Binding and Homeostasis					
Mitochondrial Metabolism	-0.00723	0.0637	0.0323	0.232	-0.00855
Myelination					
Oxidative Stress					
Proteostasis	-0.0718	0.186	0.0694	-0.11	0.019
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Ster	oid biosynth	esis	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism	0.0444	0.318	0.388	-0.148	0.0708
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.145	0.484	0.528	-0.122	0.155
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Primary b	ile acid bio	synthesis	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism	0.0682	0.00397	-0.00611	0.246	0.0439
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Steroid hormone biosynthesis				
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism	0.0424	0.036	-0.0424	0.0398	0.0942
Metal Binding and Homeostasis	0.0385	-0.007	-0.0488	0.0895	0.17
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.0791	0.149	0.14	0.0725	0.261
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Glycerolipid metabolism					
Apoptosis							
APP Metabolism							
Autophagy							
Cell Cycle							
DNA Repair							
Endolysosome							
Epigenetic							
Immune Response	0.274	0.195	0.222	0.299	0.369		
Lipid Metabolism	0.0595	0.0658	0.0991	0.0694	0.057		
Metal Binding and Homeostasis	-0.00852	-0.0143	0.137	-0.0237	0.00464		
Mitochondrial Metabolism	0.138	0.117	0.288	0.204	0.175		
Myelination							
Oxidative Stress							
Proteostasis	0.114	0.135	0.162	0.111	0.158		
RNA Spliceosome							
Structural Stabilization							
Synapse	0.117	0.119	0.242	0.2	0.0785		
Tau Homeostasis							
Vasculature							
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS		

		Glyceroph	ospholipid n	netabolism	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome	-0.0395	-0.0903	-0.0774	-0.0183	-0.118
Epigenetic					
Immune Response	0.0483	0.0239	-0.0144	0.115	0.148
Lipid Metabolism	0.0509	0.123	0.134	0.0862	0.111
Metal Binding and Homeostasis	0.0148	0.113	0.113	0.00423	0.0509
Mitochondrial Metabolism	-0.053	0.0315	0.0591	0.051	0.0321
Myelination					
Oxidative Stress					
Proteostasis	0.113	0.238	0.237	0.173	0.224
RNA Spliceosome					
Structural Stabilization	0.202	0.195	0.305	0.237	0.213
Synapse	0.0754	0.126	0.215	0.0641	0.136
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Ether	lipid metab	olism	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome	-0.16	-0.141	-0.135	-0.172	-0.123
Epigenetic					
Immune Response	-0.0996	0.0234	0.0342	-0.035	0.106
Lipid Metabolism	0.00956	0.137	0.0791	0.0618	0.115
Metal Binding and Homeostasis	-0.0378	0.154	-0.0171	-0.0811	0.11
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	-0.0267	0.0961	0.0133	0.117	0.123
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Sphin	golipid meta	bolism	
Apoptosis	0.0524	0.354	0.0823	0.0493	0.239
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome	0.107	0.139	0.0727	0.285	0.144
Epigenetic					
Immune Response	0.178	0.27	0.233	0.0936	0.308
Lipid Metabolism	0.0303	0.18	0.0435	0.146	0.117
Metal Binding and Homeostasis	0.076	0.28	0.0996	0.191	0.112
Mitochondrial Metabolism					

illillidile Response	0.176	0.27	0.233	0.0930	0.300
Lipid Metabolism	0.0303	0.18	0.0435	0.146	0.117
Metal Binding and Homeostasis	0.076	0.28	0.0996	0.191	0.112
Mitochondrial Metabolism					
Myelination	-0.0884	0.326	-0.0245	-0.00543	0.226
Oxidative Stress					
Proteostasis	0.041	0.22	0.0476	0.135	0.144
RNA Spliceosome					
Structural Stabilization					

0.266

0.222

-0.0254

WT/WT WT/FC FC/FC WT/VS

0.0253

VS/VS

Synapse

Vasculature

Tau Homeostasis

-0.0484

		Arachido	onic acid me	tabolism	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response	-0.0409	-0.134	-0.000479	0.118	0.0889
Lipid Metabolism	0.0218	-0.103	0.0156	0.13	0.0787
Metal Binding and Homeostasis	0.0261	-0.106	0.0509	0.0213	0.0663
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	-0.0479	-0.237	-0.0945	0.127	-0.0341
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Linoleic acid metabolism						
Apoptosis							
APP Metabolism							
Autophagy							
Cell Cycle							
DNA Repair							
Endolysosome							
Epigenetic							
Immune Response							
Lipid Metabolism	0.0243	-0.0152	0.00283	0.0941	0.0652		
Metal Binding and Homeostasis	0.0473	0.0374	-0.00278	0.0502	0.0865		
Mitochondrial Metabolism							
Myelination							
Oxidative Stress							
Proteostasis							
RNA Spliceosome							
Structural Stabilization							
Synapse							
Tau Homeostasis							
Vasculature							
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS		

	alpha-Linolenic acid metabolism					
Apoptosis						
APP Metabolism						
Autophagy						
Cell Cycle						
DNA Repair						
Endolysosome						
Epigenetic						
Immune Response						
Lipid Metabolism	0.0437	0.116	0.133	0.125	0.11	
Metal Binding and Homeostasis	0.0457	0.0572	0.0465	-0.0199	0.123	
Mitochondrial Metabolism						
Myelination						
Oxidative Stress						
Proteostasis						
RNA Spliceosome						
Structural Stabilization						
Synapse						
Tau Homeostasis						
Vasculature						
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS	

	В	iosynthesis	of unsaturat	ed fatty acid	ls
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism	-0.0389	0.287	0.168	0.114	0.151
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	-0.137	0.289	0.111	0.0735	0.183
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

## Purine metabolism 0.128 -0.103 -0.108 0

Apoptosis	0.128	-0.103	-0.108	0.186	-0.124
APP Metabolism					
Autophagy					
Cell Cycle	0.0395	0.121	0.0733	0.0578	-0.0554
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response	-0.0281	0.163	0.164	0.0577	-0.0659
Lipid Metabolism	0.00119	0.0443	0.0494	-0.086	-0.0957
Metal Binding and Homeostasis	-0.0462	0.0288	0.0391	-0.0422	-0.0643
Mitochondrial Metabolism	0.116	0.147	-0.0481	0.105	-0.112
Myelination					
Oxidative Stress					
Proteostasis	0.188	0.187	0.0185	0.143	0.00283
RNA Spliceosome					
Structural Stabilization	0.16	0.153	0.186	0.269	0.135
Synapse	-0.0859	0.0129	0.188	-0.131	-0.0554
Tau Homeostasis					
Vasculature	-0.165	0.0431	0.134	-0.143	0.0583
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS
	VV 1/VV 1	WI/FC	FU/FU	VV 1/ V S	V 3/ V 3

		Pyrim	idine metab	olism	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle	0.0766	0.0571	-0.0556	0.125	0.0397
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis	0.0383	-0.0998	-0.0874	0.0614	-0.0786
Mitochondrial Metabolism	0.158	0.161	-0.127	0.111	-0.0969
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Alanii	ne, aspartat	e and glutar	mate metabo	olism
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis	-0.0478	0.109	0.0957	0.00346	0.0306
Mitochondrial Metabolism	-0.0876	0.0267	0.0393	-0.0142	0.00806
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Gly	cine, serine	and threoni	ne metaboli	sm
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis					
Mitochondrial Metabolism	0.149	0.136	0.0541	0.221	0.122
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	C	Cysteine and	l methionine	metabolism	า
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis	-0.182	-0.155	-0.262	-0.158	-0.149
Mitochondrial Metabolism	0.223	0.383	0.145	0.453	0.057
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS
1					

	Vali	ne, leucine	and isoleuci	ne degrada	tion
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism	0.0139	0.0668	-0.0622	0.134	-0.0833
Metal Binding and Homeostasis	-0.00782	-0.034	-0.0778	0.00946	-0.153
Mitochondrial Metabolism	0.0134	0.0688	-0.00483	0.21	-0.0381
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Lys	ine degrada	tion	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle	-0.0467	0.0457	0.0343	-0.0927	-0.0931
DNA Repair					
Endolysosome					
Epigenetic	-0.117	-0.0469	0.0676	-0.212	-0.125
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis	-0.094	-0.0785	-0.0183	-0.213	-0.0994
Mitochondrial Metabolism	0.0219	0.0945	-0.00285	0.0749	-0.0405
Myelination					
Oxidative Stress					
Proteostasis	0.0258	-0.0421	-0.0495	-0.125	0.0418
RNA Spliceosome					
Structural Stabilization					

Synapse Tau Homeostasis Vasculature WT/WT WT/FC FC/FC WT/VS VS/VS

		Argir	nine biosynth	nesis	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis	-0.146	-0.312	-0.2	0.0479	-0.0552
Mitochondrial Metabolism	-0.236	-0.211	-0.192	-0.098	-0.0765
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Arginine a	nd proline m	netabolism	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis	0.00411	-0.0996	-0.0892	0.0443	0.0738
Mitochondrial Metabolism	0.185	0.154	0.168	0.432	0.102
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Tyros	sine metabo	lism	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism	0.202	-0.0153	0.0496	0.3	-0.075
Metal Binding and Homeostasis	0.122	-0.0133	-0.0521	0.258	0.00104
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Trypto	phan metab	oolism	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism	0.0144	0.0326	-0.109	-0.00151	0.00667
Metal Binding and Homeostasis	0.174	0.148	-0.0852	0.0146	0.202
Mitochondrial Metabolism	0.0925	0.165	0.0361	0.186	0.0674
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		beta-A	Alanine meta	bolism	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism	0.0165	0.0855	0.113	0.186	-0.176
Metal Binding and Homeostasis					
Mitochondrial Metabolism	0.158	0.232	0.256	0.382	0.162
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

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	Glutathione metabolism					
Apoptosis						
APP Metabolism						
Autophagy						
Cell Cycle						
DNA Repair						
Endolysosome						
Epigenetic						
Immune Response	0.26	0.452	0.316	0.438	0.239	
Lipid Metabolism	0.274	0.205	0.123	0.448	0.213	
Metal Binding and Homeostasis	0.193	0.257	0.122	0.145	0.312	
Mitochondrial Metabolism	0.233	0.347	0.0507	0.317	0.26	
Myelination						
Oxidative Stress	0.204	0.262	-0.0468	0.307	0.117	
Proteostasis	0.0991	0.111	-0.076	0.382	-0.0164	
RNA Spliceosome						
Structural Stabilization						
Synapse						
Tau Homeostasis						
Vasculature						
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS	

	N-Glycan biosynthesis				
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism	0.105	0.0393	0.105	0.27	-0.0571
Metal Binding and Homeostasis	0.135	0.242	0.277	0.234	0.241
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.0873	0.13	0.13	0.22	0.0833
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Va	arious types	of N-glycar	biosynthes	is
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis	0.135	0.246	0.334	0.205	0.195
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.14	0.11	0.102	0.265	0.0838
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Mucin type	O-glycan b	iosynthesis	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis	0.104	0.232	0.218	-0.0302	0.118
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.0673	0.139	0.16	-0.0373	0.0806
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	N	lannose typ	e O-glycan	biosynthesi	S
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis	0.401	0.167	0.403	0.483	0.291
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.317	0.236	0.3	0.398	0.188
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	C	Other types o	of O–glycan	biosynthesis	S
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis	0.112	0.0624	0.127	0.0837	0.0896
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.0972	0.121	0.115	0.102	0.106
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Glycos	aminoglyca	n biosynthe	sis – chondr	oitin sulfate	/ dermatan	sulf
Apoptosis						
APP Metabolism						
Autophagy						
Cell Cycle						
DNA Repair						
Endolysosome						
Epigenetic						
Immune Response						
Lipid Metabolism						
Metal Binding and Homeostasis	0.411	0.457	0.601	0.339	0.542	
Mitochondrial Metabolism						
Myelination						
Oxidative Stress						

Metal Binding and Homeostasis	0.411	0.457	0.601	0.339	0.542
Mitochondrial Metabolism Myelination					
Oxidative Stress					
Proteostasis	0.305	0.279	0.414	0.247	0.388
RNA Spliceosome					
Structural Stabilization	0.401	0.276	0.449	0.34	0.473
Synapse					
Tau Homeostasis					

WT/WT WT/FC FC/FC WT/VS VS/VS

Vasculature

## Glycosaminoglycan biosynthesis – heparan sulfate / heparin

	-,,	9.,	,		, p
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.128	0.193	0.334	0.0721	0.161
RNA Spliceosome					
Structural Stabilization	0.128	0.193	0.334	0.0721	0.161
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Glycosa	aminoglycan	biosynthes	is – keratan	sulfate
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.0538	-0.12	0.0577	0.179	0.154
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Glycosam	inoglycan de	egradation	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome	0.202	0.191	0.293	0.197	0.0978
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Glycosylphosphatidylinositol (GPI)–anchor biosynthesis					
Apoptosis		•	•			
APP Metabolism						
Autophagy						
Cell Cycle						
DNA Repair						
Endolysosome						
Epigenetic						
Immune Response						
Lipid Metabolism	0.106	0.187	0.13	0.191	0.0533	
Metal Binding and Homeostasis						
Mitochondrial Metabolism						
Myelination						
Oxidative Stress						
Proteostasis	0.106	0.187	0.13	0.191	0.0533	
RNA Spliceosome						
Structural Stabilization						
Synapse						
Tau Homeostasis						
Vasculature						
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS	

	Glycosphine	nolipid biosv	nthesis – la	cto and neo	lacto series
Apoptosis	,,	5p		210 2 4 1.00	
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism	0.0105	0.272	0.129	0.115	0.134
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.0507	0.234	0.146	0.181	0.16
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Glycosphingolipid biosynthesis – globo and isoglobo series					
Apoptosis						
APP Metabolism						
Autophagy						
Cell Cycle						
DNA Repair						
Endolysosome						
Epigenetic						
Immune Response						
Lipid Metabolism	0.0525	0.229	0.158	0.14	0.259	
Metal Binding and Homeostasis						
Mitochondrial Metabolism						
Myelination						
Oxidative Stress						
Proteostasis	0.00943	0.237	0.195	0.0794	0.197	
RNA Spliceosome						
Structural Stabilization						
Synapse						
Tau Homeostasis						
Vasculature						
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS	

	Glycosphingolipid biosynthesis – ganglio series					
Apoptosis				0 0		
APP Metabolism						
Autophagy						
Cell Cycle						
DNA Repair						
Endolysosome						
Epigenetic						
Immune Response						
Lipid Metabolism	0.203	0.118	0.166	0.0764	0.173	
Metal Binding and Homeostasis						
Mitochondrial Metabolism						
Myelination						
Oxidative Stress						
Proteostasis	0.208	0.18	0.212	0.0933	0.149	
RNA Spliceosome						
Structural Stabilization						
Synapse						
Tau Homeostasis						
Vasculature						
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS	

	Other glycan degradation				
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome	0.17	0.196	0.201	0.387	0.156
Epigenetic					
Immune Response					
Lipid Metabolism	0.306	0.247	0.183	0.459	0.285
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Nicotinate and nicotinamide metabolism	

	1 41	ootii lato ai le	· ····ootiiiaiiii	ao motabone	,,,,
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response	0.0596	0.331	0.193	0.29	0.169
Lipid Metabolism	0.148	0.0311	0.047	0.195	-0.00474
Metal Binding and Homeostasis	0.101	-0.0787	-0.0313	0.151	0.00226
Mitochondrial Metabolism	0.101	0.105	0.0169	0.28	0.108
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Lipoic acid metabolism					
Apoptosis						
APP Metabolism						
Autophagy						
Cell Cycle						
DNA Repair						
Endolysosome						
Epigenetic						
Immune Response						
Lipid Metabolism						
Metal Binding and Homeostasis						
Mitochondrial Metabolism	0.0578	0.213	0.0657	0.163	0.0247	
Myelination						
Oxidative Stress						
Proteostasis						
RNA Spliceosome						
Structural Stabilization						
Synapse						
Tau Homeostasis						
Vasculature						
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS	

	Fola	ite biosynthe	esis	
0.34	0.144	0.182	0.279	0.174
WT/WT	WT/FC	FC/FC	WT/VS	VS/VS
		0.34 0.144	0.34 0.144 0.182	

	One carbon pool by folate					
Anontonia		One ca	יטטוי טטטו ט	, ioiale		
Apoptosis						
APP Metabolism						
Autophagy						
Cell Cycle						
DNA Repair						
Endolysosome						
Epigenetic						
Immune Response						
Lipid Metabolism						
Metal Binding and Homeostasis						
Mitochondrial Metabolism	-0.267	-0.282	-0.147	0.0163	-0.325	
Myelination						
Oxidative Stress						
Proteostasis						
RNA Spliceosome						
Structural Stabilization						
Synapse						
Tau Homeostasis						
Vasculature						
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS	
	,	,. 3	. 0,. 0	, . 3	,	

	Retinol metabolism				
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism	-0.0315	-0.0685	0.0298	0.0817	-0.0488
Metal Binding and Homeostasis	-0.0434	-0.0188	-0.0354	0.0106	-0.063
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	-0.00891	-0.0331	0.104	0.0494	0.022
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Porphyrin metabolism				
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis	0.0134	0.0564	0.0708	0.0643	0.0251
Mitochondrial Metabolism	0.113	0.181	0.253	0.0429	0.0881
Myelination					
Oxidative Stress					
Proteostasis	-0.123	-0.0766	0.0414	-0.148	-0.202
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Terpenoid backbone biosynthesis					
Apoptosis						
APP Metabolism						
Autophagy						
Cell Cycle						
DNA Repair						
Endolysosome						
Epigenetic						
Immune Response						
Lipid Metabolism	0.135	0.348	0.372	-0.00729	0.00539	
Metal Binding and Homeostasis	0.00292	0.201	0.104	-0.0348	-0.0379	
Mitochondrial Metabolism						
Myelination						
Oxidative Stress						
Proteostasis						
RNA Spliceosome						
Structural Stabilization						
Synapse						
Tau Homeostasis						
Vasculature						
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS	

	Metabolism of xenobiotics by cytochrome P450						
Apoptosis							
APP Metabolism							
Autophagy							
Cell Cycle							
DNA Repair							
Endolysosome							
Epigenetic							
Immune Response							
Lipid Metabolism	0.19	0.194	0.177	0.272	0.0308		
Metal Binding and Homeostasis	0.111	0.201	0.181	0.245	0.111		
Mitochondrial Metabolism							
Myelination							
Oxidative Stress							
Proteostasis	0.139	0.254	0.176	0.24	0.0137		
RNA Spliceosome							
Structural Stabilization							
Synapse							
Tau Homeostasis							
Vasculature							
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS		

# Apoptosis APP Metabolism Autophagy Cell Cycle DNA Repair

0.0761

0.189

0.209

WT/FC

Drug metabolism – cytochrome P450

0.115

0.0313

0.189

FC/FC

0.197

0.259

0.228

WT/VS

0.0997

-0.000613

0.187

VS/VS

Endolysosome
Epigenetic
Immune Response
Lipid Metabolism

Metal Binding and Homeostasis

Mitochondrial Metabolism

Myelination

**Proteostasis** 

Synapse

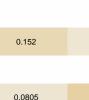
Vasculature

Oxidative Stress

**RNA Spliceosome** 

Tau Homeostasis

Structural Stabilization



0.167

WT/WT

# Drug metabolism – other enzymes

		Brag motas	JOHOITI OUI	01 0112y11100	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle	0.083	0.047	-0.0338	0.119	0.0407
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism	0.223	0.0738	0.0151	0.167	-0.0794
Metal Binding and Homeostasis	0.0164	-0.11	-0.148	0.0867	-0.119
Mitochondrial Metabolism	0.248	0.307	-0.00625	0.286	-0.0294
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	RNA polymerase				
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle	-0.159	-0.327	-0.345	-0.0319	-0.472
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response	-0.0315	0.00649	0.00516	-0.00345	-0.086
Lipid Metabolism					
Metal Binding and Homeostasis	-0.287	-0.302	-0.288	-0.138	-0.498
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Basal transcription factors

Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle	-0.217	-0.049	-0.133	-0.125	-0.19
DNA Repair	-0.103	-0.176	-0.225	-0.135	-0.248
Endolysosome					
Epigenetic	0.0648	0.0893	-0.09	0.0216	-0.033
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Ş	Spliceosome	<del>)</del>
;	0.057	0.326	-0.0881	

Apoptosis	0.057	0.326	-0.0881	-0.119	-0.0916
APP Metabolism					
Autophagy					
Cell Cycle	-0.0246	0.0796	-0.0761	-0.0659	-0.188
DNA Repair	0.202	0.32	-0.11	0.104	-0.131
Endolysosome					
Epigenetic	0.195	0.452	0.124	0.0645	0.0591
Immune Response	0.049	0.309	0.111	-0.0305	0.0238
Lipid Metabolism					
Metal Binding and Homeostasis	0.0574	-0.151	-0.285	-0.0485	-0.23
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.159	0.0237	-0.0597	0.182	-0.0413
RNA Spliceosome	0.0729	-0.0434	-0.211	0.0554	-0.146
Structural Stabilization	0.215	0.386	-0.0662	0.177	0.00836
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

			Dikasasas		
Anontosis			Ribosome		
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response	-0.222	-0.803	-0.871	0.0948	-0.511
Lipid Metabolism					
Metal Binding and Homeostasis					
Mitochondrial Metabolism	0.0226	-0.316	-0.401	0.175	-0.346
Myelination					
Oxidative Stress					
Proteostasis	-0.0836	-0.594	-0.678	0.106	-0.457
RNA Spliceosome					
Structural Stabilization	-0.0869	-0.601	-0.684	0.0991	-0.461
Synapse	-0.185	-0.846	-0.906	0.0266	-0.58
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Aminoacyl-tRNA biosynthesis				
Apoptosis		,		5,11110010	
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis					
Mitochondrial Metabolism	0.038	-0.0381	0.076	0.0675	-0.157
Myelination					
Oxidative Stress					
Proteostasis	0.034	0.0229	0.0325	0.066	-0.196
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Nucleoc	ytoplasmic t	ransport	
Apoptosis	0.294	0.323	0.285	0.225	0.094
APP Metabolism					
Autophagy					
Cell Cycle	-0.117	0.0982	0.0959	-0.16	-0.135
DNA Repair					
Endolysosome					
Epigenetic	-0.153	0.0319	0.308	-0.207	-0.0964
Immune Response	-0.246	-0.046	-0.0814	-0.075	-0.152
Lipid Metabolism					
Metal Binding and Homeostasis					

Lpigenetic	-0.153	0.0319	0.308	-0.207	-0.0964
Immune Response	-0.246	-0.046	-0.0814	-0.075	-0.152
Lipid Metabolism					
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.00793	0.14	0.0669	-0.0377	-0.0615
RNA Spliceosome	0.147	0.00481	-0.0755	0.238	0.0532
Structural Stabilization	-0.0974	0.0203	0.0842	-0.165	-0.129
Synapse					
Tau Homeostasis					

Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.00793	0.14	0.0669	-0.0377	-0.0615
RNA Spliceosome	0.147	0.00481	-0.0755	0.238	0.0532
Structural Stabilization	-0.0974	0.0203	0.0842	-0.165	-0.129
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### mRNA surveillance pathway

		1111 (1 1) ( 0	ai voiliai ioo	patimay	
Apoptosis	0.203	0.383	0.334	0.163	0.183
APP Metabolism					
Autophagy					
Cell Cycle	0.12	0.381	0.267	0.215	0.0737
DNA Repair	-0.0932	-0.0672	-0.107	-0.181	-0.0929
Endolysosome					
Epigenetic	0.121	0.187	0.101	0.138	-0.0661
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis	-0.0264	0.181	0.0721	-0.0341	-0.0492
Mitochondrial Metabolism	-0.065	0.435	0.205	0.0227	0.0542
Myelination					
Oxidative Stress					
Proteostasis	-0.0205	0.0718	-0.056	0.0518	0.0233
RNA Spliceosome	0.174	0.178	0.0611	0.298	0.0972
Structural Stabilization	0.229	0.406	0.245	0.231	0.255
Synapse	0.077	0.42	0.226	0.13	-0.0584
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Ribosome b	iogenesis in	eukaryotes	}
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic	0.0032	-0.0738	0.0639	-0.014	-0.205
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis					
Mitochondrial Metabolism	-0.0845	-0.378	-0.209	-0.0633	-0.264
Myelination					
Oxidative Stress					
Proteostasis	-0.0965	-0.163	-0.0736	-0.0985	-0.205
RNA Spliceosome					
Structural Stabilization	0.0162	-0.209	-0.0564	0.05	-0.0692
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Р	rotein expor	rt .	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.0897	0.0251	-0.121	0.226	0.0233
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

## Protein processing in endoplasmic reticulum

	5111 P1000001	ng m ondop		ararri
-0.0488	0.163	3.04e-05	0.114	0.117
0.0713	0.26	0.0169	0.0916	0.234
0.179	0.183	-0.00354	0.303	0.076
0.302	0.272	0.0754	0.461	0.259
-0.0103	0.105	-0.0114	0.11	0.175
0.106	0.336	0.226	0.157	0.346
-0.0451	0.111	-0.0453	0.14	0.126
0.00887	0.2	0.0148	0.117	0.125
-0.0131	0.222	0.164	0.0566	0.144
0.12	0.305	0.15	0.137	0.208
-0.0368	0.22	-0.0458	0.193	0.226
-0.0152	0.164	0.037	0.114	0.108
-0.0231	0.152	-0.0199	0.106	0.162
0.0627	0.302	0.201	0.212	0.271
-0.0622	0.0325	-0.0422	0.0991	0.0667
WT/WT	WT/FC	FC/FC	WT/VS	VS/VS
	-0.0488  0.0713  0.179  0.302  -0.0103  0.106  -0.0451  0.00887  -0.0131  0.12  -0.0368  -0.0152  -0.0231  0.0627	-0.0488	-0.0488       0.163       3.04e-05         0.0713       0.26       0.0169         0.179       0.183       -0.00354         0.302       0.272       0.0754         -0.0103       0.105       -0.0114         0.106       0.336       0.226         -0.0451       0.111       -0.0453         0.00887       0.2       0.0148         -0.0131       0.222       0.164         0.12       0.305       0.15         -0.0368       0.22       -0.0458         -0.0152       0.164       0.037         -0.0231       0.152       -0.0199         0.0627       0.302       0.201	-0.0488       0.163       3.04e-05       0.114         0.0713       0.26       0.0169       0.0916         0.179       0.183       -0.00354       0.303         0.302       0.272       0.0754       0.461         -0.0103       0.105       -0.0114       0.11         0.106       0.336       0.226       0.157         -0.0451       0.111       -0.0453       0.14         0.00887       0.2       0.0148       0.117         -0.0131       0.222       0.164       0.0566         0.12       0.305       0.15       0.137         -0.0368       0.22       -0.0458       0.193         -0.0152       0.164       0.037       0.114         -0.0231       0.152       -0.0199       0.106         0.0627       0.302       0.201       0.212         -0.0622       0.0325       -0.0422       0.0991

SNARE interactions in vesicular transport

Apoptosis				·	
APP Metabolism					
Autophagy	-0.124	-0.0251	-0.14	-0.0425	-0.153
Cell Cycle					
DNA Repair					
Endolysosome	0.013	-0.0348	-0.0963	0.0165	0.0258
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.0494	0.033	-0.0851	0.0782	0.0635
RNA Spliceosome					
Structural Stabilization					
Synapse	-0.00575	-0.0156	-0.0754	-0.0156	0.0199
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

## Ubiquitin mediated proteolysis

0.0659 -0.0652 0.0188 0.0771 0.0519 0.0496 0.0945 -0.0631 -0.0555	-0.08  0.225  0.283  0.172  0.307  0.382  0.108  0.049  -0.0544	0.326 0.2 0.319 0.403 0.266 0.327 0.164 0.191	-0.00322 -0.0445 -0.0245 0.0518 -0.0454 0.0965 0.104 -0.0519	0.011 -0.00408 0.117 0.104 0.136 0.191 0.0773 0.0334
-0.0652 0.0188 0.0771 0.0519 0.0496 0.0945 -0.0631	0.225 0.283 0.172 0.307 0.382 0.108 0.049	0.2 0.319 0.403 0.266 0.327 0.164 0.191	-0.0445 -0.0245 0.0518 -0.0454 0.0965	-0.00408  0.117  0.104  0.136  0.191  0.0773
0.0188 0.0771 0.0519 0.0496 0.0945 -0.0631	0.283 0.172 0.307 0.382 0.108 0.049	0.319 0.403 0.266 0.327 0.164 0.191	-0.0245 0.0518 -0.0454 0.0965 0.104	0.117 0.104 0.136 0.191 0.0773
0.0771 0.0519 0.0496 0.0945 -0.0631	0.172 0.307 0.382 0.108 0.049	0.403 0.266 0.327 0.164 0.191	0.0518 -0.0454 0.0965 0.104	0.104 0.136 0.191 0.0773
0.0519 0.0496 0.0945 -0.0631	0.307 0.382 0.108 0.049	0.266 0.327 0.164 0.191	-0.0454 0.0965 0.104	0.136 0.191 0.0773
0.0496 0.0945 -0.0631	0.382 0.108 0.049	0.327 0.164 0.191	0.0965	0.191
0.0945	0.108 0.049	0.164 0.191	0.104	0.0773
-0.0631	0.049	0.191		
			-0.0519	0.0334
-0.0555	-0.0544			
		0.0221	-0.065	-0.137
-0.0164	0.22	0.192	-0.00692	0.0651
-0.00416	-0.0213	0.191	0.00518	-0.00659
-0.0115	0.199	0.222	-0.0623	0.062
0.0671	0.0917	0.257	0.0994	0.167
VT/WT	WT/FC	FC/FC	WT/VS	VS/VS
	-0.00416 -0.0115 0.0671	-0.00416 -0.0213 -0.0115 0.199 0.0671 0.0917	-0.00416     -0.0213     0.191       -0.0115     0.199     0.222       0.0671     0.0917     0.257	-0.00416     -0.0213     0.191     0.00518       -0.0115     0.199     0.222     -0.0623       0.0671     0.0917     0.257     0.0994

		1	Proteasome		
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.00604	-0.145	-0.294	0.16	-0.357
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS
	· · · ·			, . 3	

		RN	IA degradati	ion		
Apoptosis						
APP Metabolism						
Autophagy						
Cell Cycle						
DNA Repair						
Endolysosome						
Epigenetic	-0.113	0.0896	0.00368	-0.125	-0.159	
Immune Response	-0.127	0.107	-0.105	-0.117	-0.129	
Lipid Metabolism						
letal Binding and Homeostasis	-0.0682	0.144	0.0422	-0.12	-0.0454	
Mitochondrial Metabolism	-0.0132	0.262	0.0764	0.0463	-0.0549	
Myelination						
Oxidative Stress						
Proteostasis	-0.0939	-0.015	-0.116	-0.15	-0.123	
RNA Spliceosome	0.0468	-0.224	-0.568	0.054	-0.171	
Structural Stabilization						
Synapse						
Tau Homeostasis						
Vasculature						
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS	

		D	NA replication	n	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle	0.019	-0.0217	-0.119	0.0944	-0.241
DNA Repair	0.0492	-0.0619	-0.115	0.104	-0.216
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis	-0.0259	0.045	0.00327	0.0823	-0.327
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

## Base excision repair

Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle	0.158	-0.0336	-0.0286	0.153	-0.123
DNA Repair	0.135	-0.0187	-0.0407	0.124	-0.0819
Endolysosome					
Epigenetic	0.336	0.191	0.0472	0.22	0.0209
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis	0.171	0.075	0.0242	0.254	0.0207
Mitochondrial Metabolism	0.163	0.0396	-0.0371	0.192	-0.0882
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Apoptosis APP Metabolism Autophagy Cell Cycle			Nucleo	tide excisior	n repair	
Autophagy  Cell Cycle ONA Repair ONA Repair ONA Repair ONB19	Apoptosis				·	
Cell Cycle DNA Repair -0.00767 -0.0269 -0.0125 -0.017 -0.213  Endolysosome Epigenetic -0.0819 -0.0333 -0.0185 -0.186 -0.177  Immune Response Lipid Metabolism Metal Binding and Homeostasis -0.0365 -0.136 -0.242 -0.0366 -0.372  Mitochondrial Metabolism Myelination Oxidative Stress Proteostasis 0.0736 0.234 0.067 0.228 -0.177  RNA Spliceosome Structural Stabilization	APP Metabolism					
DNA Repair Endolysosome Epigenetic -0.0819 -0.0333 0.0185 -0.186 -0.177  Immune Response Lipid Metabolism Metal Binding and Homeostasis Myelination Oxidative Stress Proteostasis RNA Spliceosome Structural Stabilization	Autophagy					
Endolysosome Epigenetic -0.0819 -0.0333 0.0185 -0.186 -0.177  Immune Response Lipid Metabolism  Metal Binding and Homeostasis -0.0365 -0.136 -0.242 0.0356 -0.372  Mitochondrial Metabolism Myelination Oxidative Stress Proteostasis 0.0736 0.234 0.067 0.228 -0.177  RNA Spliceosome Structural Stabilization	Cell Cycle	-0.0192	-0.0569	-0.091	0.0577	-0.248
Epigenetic -0.0819 -0.0333 0.0185 -0.186 -0.177  Immune Response Lipid Metabolism  Metal Binding and Homeostasis -0.0365 -0.136 -0.242 0.0356 -0.372  Mitochondrial Metabolism    Myelination Oxidative Stress Proteostasis 0.0736 0.234 0.067 0.228 -0.177  RNA Spliceosome Structural Stabilization	DNA Repair	-0.00767	-0.0269	-0.125	0.017	-0.213
Immune Response Lipid Metabolism  Metal Binding and Homeostasis  Mitochondrial Metabolism  Myelination  Oxidative Stress  Proteostasis  0.0736  0.234  0.067  0.228  -0.177  RNA Spliceosome  Structural Stabilization	Endolysosome					
Lipid Metabolism  Metal Binding and Homeostasis -0.0365 -0.136 -0.242 0.0356 -0.372  Mitochondrial Metabolism     Myelination  Oxidative Stress Proteostasis 0.0736 0.234 0.067 0.228 -0.177  RNA Spliceosome Structural Stabilization	Epigenetic	-0.0819	-0.0333	0.0185	-0.186	-0.177
Metal Binding and Homeostasis  -0.0365  -0.136  -0.242  0.0356  -0.372  Mitochondrial Metabolism     Myelination  Oxidative Stress  Proteostasis  0.0736  0.234  0.067  0.228  -0.177  RNA Spliceosome  Structural Stabilization	Immune Response					
Mitochondrial Metabolism Myelination Oxidative Stress Proteostasis 0.0736 0.234 0.067 0.228 -0.177 RNA Spliceosome Structural Stabilization	Lipid Metabolism					
Myelination Oxidative Stress Proteostasis O.0736 O.234 O.067 O.228 O.177 RNA Spliceosome Structural Stabilization	Metal Binding and Homeostasis	-0.0365	-0.136	-0.242	0.0356	-0.372
Oxidative Stress Proteostasis 0.0736 0.234 0.067 0.228 -0.177  RNA Spliceosome Structural Stabilization	Mitochondrial Metabolism					
Proteostasis 0.0736 0.234 0.067 0.228 -0.177  RNA Spliceosome Structural Stabilization	Myelination					
RNA Spliceosome Structural Stabilization	Oxidative Stress					
Structural Stabilization	Proteostasis	0.0736	0.234	0.067	0.228	-0.177
	RNA Spliceosome					
Synapse	Structural Stabilization					
	Synapse					

WT/WT WT/FC FC/FC WT/VS

VS/VS

Tau Homeostasis

Vasculature

		Mi	ismatch repa	air	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle	-0.0209	-0.0854	-0.0756	0.0569	-0.331
DNA Repair	-0.0391	-0.0751	-0.082	0.0339	-0.31
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Apoptosis	
APP Metabolism	

WT/WT WT/FC FC/FC WT/VS

VS/VS

Homologous recombination

7ti i Wetabolisiii					
Autophagy					
Cell Cycle	-0.0157	0.00138	-0.104	0.0128	-0.206
DNA Repair	-0.0396	-0.0365	-0.136	-0.00036	-0.235
Endolysosome					
Epigenetic	-0.0182	-0.072	-0.167	-0.15	-0.169
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis	-0.0355	-0.0985	-0.048	-0.045	-0.151
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	-0.0524	-0.207	-0.185	0.0761	-0.267
RNA Spliceosome					
Structural Stabilization	-0.131	0.0429	-0.0325	-0.0875	-0.0329
Synapse					
Tau Homeostasis					
Vasculature					

	Non-homologous end-joining				
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle	0.1	0.127	0.109	0.0643	-0.0493
DNA Repair	0.1	0.127	0.109	0.0643	-0.0493
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					

Structural Stabilization

Synapse

Tau Homeostasis

Vasculature

WT/WT WT/FC FC/FC WT/VS VS/VS

		Fancoi	ni anemia pa	athway	
Apoptosis			•	,	
APP Metabolism					
Autophagy					
Cell Cycle	-0.0965	-0.0732	-0.0241	-0.0356	-0.159
DNA Repair	-0.0518	-0.0247	-0.0318	-0.0141	-0.106
Endolysosome					
Epigenetic	-0.0508	-0.18	-0.0897	-0.0131	-0.0449
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis	-0.106	-0.0281	0.0534	-0.119	-0.175
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	-0.0474	-0.032	-0.104	0.0544	-0.0909
RNA Spliceosome					
Structural Stabilization					
Synapse					

WT/WT WT/FC FC/FC WT/VS

VS/VS

Tau Homeostasis

Vasculature

-0.0339

Apoptosis

Vasculature

ATP-dependent chromatin remodeling							
-0.0647	-0.0744	0.0673	-0.153				

APP Metabolism					
Autophagy					
Cell Cycle	0.0421	-0.0295	0.0125	0.056	-0.0581
DNA Repair	0.101	0.0134	0.0505	0.0787	-0.0386
Endolysosome					
Epigenetic	0.0541	-0.00796	0.0125	0.0602	-0.0517
Immune Response	0.116	0.0938	0.0993	0.0538	0.109
Lipid Metabolism					
letal Binding and Homeostasis	-0.018	0.0288	0.0586	-0.0485	-0.0583
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization	0.115	0.107	0.0514	0.0876	0.0883
Synapse	0.149	0.0141	0.194	0.113	0.058
Tau Homeostasis					

WT/WT WT/FC FC/FC WT/VS

VS/VS

	Polycomb repressive complex				
Apoptosis	0.0804	0.298	0.17	0.0918	0.178
APP Metabolism					
Autophagy					
Cell Cycle	-0.0829	0.0393	0.00807	-0.0549	-0.0734
DNA Repair	0.0713	0.364	0.278	-0.0187	0.312
Endolysosome					
Epigenetic	0.0282	0.156	0.161	0.00868	0.132
Immune Response	-0.179	-0.0548	-0.0375	-0.177	0.0135
Lipid Metabolism					
Metal Binding and Homeostasis	0.0068	0.121	0.082	0.0187	0.177
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.0321	0.468	0.391	-0.0495	0.366
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### Viral life cycle – HIV-1

			,		
Apoptosis	-0.101	-0.0788	0.102	-0.233	0.0649
APP Metabolism					
Autophagy	0.212	0.236	0.125	0.109	0.0718
Cell Cycle	0.207	0.291	-0.0492	0.245	0.166
DNA Repair					
Endolysosome	0.265	0.339	0.18	0.211	0.142
Epigenetic	-0.0825	0.0137	-0.149	0.0214	0.0523
Immune Response	-0.129	-0.121	-0.0352	-0.126	0.072
Lipid Metabolism	0.0201	0.163	0.0721	0.0245	0.0754
Metal Binding and Homeostasis	-0.185	-0.0876	-0.0298	-0.212	-0.119
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.0345	0.249	0.161	-0.0553	0.131
RNA Spliceosome					
Structural Stabilization	0.194	0.198	0.0868	0.185	0.155
Synapse	0.153	0.0721	0.219	0.0547	0.199
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### Virion - Hanatitic viruses

		Virion	– Hepatitis v	/iruses	
Apoptosis					
APP Metabolism					
Autophagy	0.225	0.425	0.287	0.236	0.151
Cell Cycle					
DNA Repair					
Endolysosome	0.0429	0.26	0.0504	0.113	0.00739
Epigenetic					
Immune Response	-0.0718	0.21	0.165	0.0218	0.0834
Lipid Metabolism	0.0983	0.245	0.176	0.129	0.12
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.0564	0.321	0.113	0.122	0.009
RNA Spliceosome					
Structural Stabilization	0.0317	0.145	-0.00313	0.151	-0.03
Synapse					
Tau Homeostasis					
Vasculature	0.0421	0.223	0.176	0.0965	0.08
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

# ABC transporters

Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome	0.141	0.0805	0.236	0.223	0.167
Epigenetic					
Immune Response	0.112	0.0584	-0.0255	0.146	-0.0129
Lipid Metabolism	-0.0606	0.000513	0.0279	0.0201	0.0529
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.056	0.0184	-0.00612	0.0873	-0.0535
RNA Spliceosome					
Structural Stabilization					
Synapse	-0.0242	-0.015	-0.0511	-0.00778	0.00745
Tau Homeostasis					
Vasculature	-0.12	-0.194	-0.127	0.111	0.143
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

MAPK	signaling p	athway

		WAPK	signaling pa	athway	
Apoptosis	0.0635	0.216	0.17	0.0974	0.169
APP Metabolism	0.117	0.152	0.375	0.191	0.257
Autophagy	0.0711	0.226	0.177	0.127	0.149
Cell Cycle	0.0904	0.219	0.216	0.101	0.182
DNA Repair	0.0918	0.234	0.199	0.115	0.0802
Endolysosome	0.12	0.151	0.169	0.179	0.162
Epigenetic	0.0563	0.23	0.178	0.104	0.143
Immune Response	0.0275	0.173	0.127	0.0869	0.15
Lipid Metabolism	0.0297	0.225	0.18	0.0692	0.17
Metal Binding and Homeostasis	0.0178	0.186	0.205	-0.0268	0.118
Mitochondrial Metabolism	0.149	0.275	0.229	0.171	0.265
Myelination	0.225	0.214	0.247	0.304	0.3
Oxidative Stress	0.203	0.49	0.413	0.299	0.343
Proteostasis	0.131	0.205	0.21	0.214	0.202
RNA Spliceosome					
Structural Stabilization	0.0759	0.158	0.15	0.124	0.2
Synapse	0.101	0.216	0.245	0.0999	0.235
Tau Homeostasis					
Vasculature	0.0711	0.184	0.176	0.102	0.176
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

### ErbB signaling pathway

Apoptosis	0.125	0.315	0.326	0.0783	0.297
APP Metabolism					
Autophagy	0.265	0.333	0.425	0.188	0.291
Cell Cycle	0.275	0.302	0.344	0.29	0.381
DNA Repair	0.173	0.187	0.465	0.187	0.221
Endolysosome	0.25	0.244	0.424	0.246	0.325
Epigenetic	0.138	0.307	0.313	0.147	0.258
Immune Response	0.116	0.275	0.294	0.0406	0.256
Lipid Metabolism	0.129	0.237	0.315	0.137	0.274
Metal Binding and Homeostasis	0.0703	0.0273	0.198	0.0353	0.208
Mitochondrial Metabolism	0.227	0.382	0.417	0.122	0.383
Myelination					
Oxidative Stress	0.384	0.564	0.592	0.393	0.54
Proteostasis	0.287	0.351	0.367	0.3	0.35
RNA Spliceosome					
Structural Stabilization	0.167	0.309	0.345	0.106	0.288
Synapse	0.0925	0.292	0.36	-0.000424	0.284
Tau Homeostasis					
Vasculature	0.141	0.32	0.333	0.08	0.276
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### Ras signaling pathway

	rac eightening paramas				
Apoptosis	0.0091	0.162	0.166	0.0249	0.212
APP Metabolism	0.0965	0.201	0.32	0.00738	0.289
Autophagy	0.146	0.275	0.346	0.138	0.268
Cell Cycle	0.0744	0.213	0.206	0.102	0.266
DNA Repair	0.274	0.336	0.443	0.176	0.253
Endolysosome	0.0703	0.167	0.242	0.118	0.236
Epigenetic	0.0152	0.232	0.196	0.0265	0.189
Immune Response	0.0269	0.155	0.165	0.0661	0.189
Lipid Metabolism	0.044	0.129	0.14	0.0632	0.177
Metal Binding and Homeostasis	0.0802	0.0736	0.17	-0.0423	0.131
Mitochondrial Metabolism	0.114	0.206	0.173	0.157	0.28
Myelination	0.249	0.275	0.308	0.229	0.325
Oxidative Stress	0.218	0.409	0.36	0.278	0.4
Proteostasis	0.154	0.226	0.27	0.2	0.254
RNA Spliceosome					
Structural Stabilization	0.0752	0.188	0.175	0.101	0.253
Synapse	0.0733	0.211	0.23	0.0542	0.244
Tau Homeostasis					
Vasculature	0.0555	0.223	0.154	0.0778	0.219
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### Rap1 signaling pathway

		ιταρι	signaling pa	uriway	
Apoptosis	0.00523	0.182	0.196	-0.0138	0.243
APP Metabolism	0.0462	0.0622	0.335	-0.0725	0.317
Autophagy	0.1	0.233	0.347	0.118	0.342
Cell Cycle	0.0847	0.226	0.257	0.134	0.275
DNA Repair	0.0926	0.221	0.212	0.0169	0.184
Endolysosome	0.023	0.158	0.265	0.0185	0.307
Epigenetic	0.0944	0.262	0.245	0.131	0.248
Immune Response	0.0644	0.168	0.214	0.0914	0.237
Lipid Metabolism	-0.0455	0.106	0.14	-0.0196	0.156
Metal Binding and Homeostasis	-0.0477	0.0384	0.0906	-0.0746	0.075
Mitochondrial Metabolism	0.0488	0.259	0.203	0.0689	0.257
Myelination	0.152	0.291	0.285	0.103	0.322
Oxidative Stress	0.157	0.331	0.424	0.217	0.459
Proteostasis	0.15	0.248	0.258	0.21	0.299
RNA Spliceosome					
Structural Stabilization	0.0519	0.158	0.192	0.0561	0.226
Synapse	0.0629	0.151	0.225	0.0435	0.251
Tau Homeostasis					
Vasculature	0.0763	0.176	0.164	0.0905	0.184
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### Wnt signaling pathway

APP Metabolism					
Autophagy	-0.042	0.136	0.0686	8.82e-05	0.0233
Cell Cycle	-0.0439	0.124	0.212	-0.0661	0.173
DNA Repair	0.00285	-0.113	0.0764	0.0399	0.0374
Endolysosome	0.227	0.192	0.107	0.246	0.254
Epigenetic	-0.000392	0.124	0.11	0.0102	0.146
Immune Response	0.0905	0.152	0.0987	0.0548	0.186
Lipid Metabolism	-0.0249	0.17	0.133	-0.00443	0.1
letal Binding and Homeostasis	0.00522	0.155	0.172	-0.0543	0.126
Mitochondrial Metabolism	0.0556	0.186	0.177	0.0898	0.0643
Myelination					
Oxidative Stress	0.151	0.573	0.347	0.265	0.364
Proteostasis	0.0726	0.205	0.168	0.0709	0.173
RNA Spliceosome					
Structural Stabilization	0.0463	0.0914	0.0971	0.0312	0.0868
Synapse	0.173	0.249	0.188	0.121	0.194
Tau Homeostasis					
Vasculature	0.081	0.16	0.101	0.0978	0.174
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

## Notch signaling pathway

			• • •	•	
Apoptosis	-0.0179	-0.0741	0.119	0.0842	-0.0136
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome	0.246	0.202	0.28	0.297	0.114
Epigenetic	0.148	0.063	0.185	0.17	0.129
Immune Response	0.178	0.117	0.367	0.234	0.275
Lipid Metabolism	0.0339	-0.0479	0.0792	0.183	-0.00559
Metal Binding and Homeostasis	0.0908	0.00962	0.301	0.169	0.2
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.116	0.0439	0.253	0.209	0.131
RNA Spliceosome					
Structural Stabilization	0.227	0.0893	0.131	0.344	0.183
Synapse	0.0965	0.0289	0.156	0.209	0.00165
Tau Homeostasis					
Vasculature	0.0341	0.157	0.347	0.231	0.216
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

## Hedgehog signaling pathway

	riougoriog olgridining patrivay				
Apoptosis	-0.153	0.0422	0.0549	-0.04	0.145
APP Metabolism					
Autophagy					
Cell Cycle	-0.304	-0.0434	0.00813	-0.148	-0.0998
DNA Repair					
Endolysosome	0.268	0.0811	0.322	0.31	0.395
Epigenetic	-0.0383	-0.0481	-0.0712	0.155	0.0551
Immune Response	-0.0035	-0.0461	0.0163	0.256	0.161
Lipid Metabolism	0.159	0.181	0.328	0.201	0.252
Metal Binding and Homeostasis	0.101	0.203	0.179	0.197	0.154
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.0825	0.248	0.326	0.106	0.271
RNA Spliceosome					
Structural Stabilization	0.0635	0.0463	0.177	0.0759	0.142
Synapse	0.145	0.125	0.203	0.251	0.202
Tau Homeostasis					
Vasculature	0.296	0.207	0.139	0.46	0.222
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

TGF-be	ta signaling	pathway	
0.152	0.197	0.0499	

Apoptosis	-0.00927	0.152	0.197	0.0499	0.0922
APP Metabolism					
Autophagy					
Cell Cycle	-0.0136	0.166	0.273	0.0328	0.198
DNA Repair					
Endolysosome	0.0757	0.355	0.295	0.0481	0.265
Epigenetic	0.0615	0.155	0.188	0.11	0.226
Immune Response	0.104	0.2	0.225	0.0766	0.208
Lipid Metabolism	0.0466	0.266	0.299	0.0853	0.218
letal Binding and Homeostasis	-0.0465	0.199	0.239	-0.0561	0.154
Mitochondrial Metabolism	0.133	0.388	0.427	0.0672	0.167
Myelination					
Oxidative Stress	-0.121	-0.118	0.168	-0.0716	0.0252
Proteostasis	0.0254	0.116	0.136	0.0346	0.103
RNA Spliceosome					
Structural Stabilization	0.0682	0.122	0.235	0.0802	0.189
Synapse	0.128	0.281	0.33	0.11	0.244
Tau Homeostasis					
Vasculature	0.0201	0.152	0.205	0.0988	0.17
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Hippo	signaling pa	athway	

Apoptosis	-0.0218	0.0903	0.173	0.0741	0.16
APP Metabolism					
Autophagy					
Cell Cycle	0.0391	0.101	0.214	0.131	0.168
DNA Repair	0.151	0.0139	0.198	0.25	0.356
Endolysosome	0.212	0.164	0.214	0.217	0.341
Epigenetic	-0.00962	0.0411	0.0571	0.137	0.202
Immune Response	0.0849	0.164	0.197	0.112	0.226
Lipid Metabolism	0.00905	0.129	0.183	0.0849	0.199
letal Binding and Homeostasis	-0.0369	0.135	0.196	0.0073	0.195
Mitochondrial Metabolism	0.292	0.456	0.373	0.255	0.156
Myelination	-0.0388	0.0829	0.0472	0.00814	0.123
Oxidative Stress	-0.121	0.0412	0.235	0.0339	0.117
Proteostasis	0.115	0.155	0.236	0.133	0.26
RNA Spliceosome					
Structural Stabilization	0.0343	0.13	0.176	0.0768	0.179
Synapse	0.125	0.259	0.271	0.13	0.246
Tau Homeostasis					
Vasculature	0.0212	0.111	0.112	0.124	0.299
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

### -0.162

0.0507

0.135

0.449

FC/FC

Hippo signaling pathway - multiple species

0.0414

-0.0541

0.0757

0.0205

WT/VS

0.0897

Autophagy Cell Cycle

Immune Response

Metal Binding and Homeostasis

Mitochondrial Metabolism

Lipid Metabolism

Oxidative Stress

**RNA Spliceosome** 

Tau Homeostasis

Structural Stabilization

APP Metabolism

0.0438

WT/WT

0.0638

0.125

WT/FC

0.236

0.32

VS/VS

Endolysosome Epigenetic

Myelination

**Proteostasis** 

Synapse

Vasculature

**DNA** Repair

**Apoptosis** 

-0.0673

	VEGF signaling pathway					
Apoptosis	0.141	0.141	0.128	0.196		
APP Metabolism						
Autophagy	0.007	0.070	0.044	0.000		

0.262

0.245

0.257

0.33

0.176

0.193

0.178

0.246

0.22

0.295

0.219

0.286

0.24

WT/FC

0.224

0.242

0.206

0.278

0.131

0.147

0.125

0.172

0.106

0.249

0.148

0.225

0.203

FC/FC

0.282

0.303

0.316

0.189

0.222

0.247

0.221

0.289

0.422

0.344

0.233

0.244

0.0935

WT/VS

0.291

0.347

0.312

0.141

0.288

0.346

0.246

0.243

0.131

0.283

0.276

0.438

0.294

0.335

0.253

VS/VS

Apoptosis	0.141	0.141	0.128	0.196
APP Metabolism				
Autophagy	0.297	0.278	0.211	0.386

0.207

0.248

0.249

0.213

0.185

0.142

0.15

0.196

0.202

0.27

0.187

0.215

0.0931

WT/WT

Cell Cycle

**DNA** Repair

**Epigenetic** 

Myelination

**Proteostasis** 

Synapse

Vasculature

Oxidative Stress

**RNA Spliceosome** 

Tau Homeostasis

Structural Stabilization

Endolysosome

Immune Response

Metal Binding and Homeostasis

Mitochondrial Metabolism

Lipid Metabolism

		Apelin signaling pathway					
Apoptosis	0.203	0.313	0.339	0.228			

0.357

7 (20)10313	0.200	0.515	0.555	0.220	0.557
APP Metabolism					
Autophagy	0.105	0.349	0.447	0.159	0.154
Cell Cycle	0.198	0.308	0.376	0.198	0.328
DNA Repair					
Endolysosome	0.132	0.254	0.327	0.172	0.287
Epigenetic	0.189	0.24	0.363	0.181	0.384
Immune Response	0.0471	0.125	0.239	0.0406	0.191
Lipid Metabolism	0.0384	0.177	0.242	0.0658	0.145
Metal Binding and Homeostasis	0.0633	0.187	0.211	0.0581	0.158
Mitochondrial Metabolism	0.0693	0.155	0.2	0.0486	0.128
Myelination	0.365	0.373	0.29	0.372	0.301
Oxidative Stress	0.213	0.281	0.304	0.324	0.349
Proteostasis	0.055	0.132	0.152	0.0921	0.118
RNA Spliceosome					
Structural Stabilization	0.096	0.11	0.191	0.109	0.241
Synapse	0.0642	0.168	0.239	0.0373	0.134
Tau Homeostasis					
Vasculature	0.0895	0.088	0.214	0.0809	0.237
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

### JAK-STAT signaling pathway

Apoptosis  APP Metabolism  Autophagy  Cell Cycle	-0.0638 -0.0261	0.0213	0.0321	0.125	0.0812
Autophagy	-0.0261	0.412			
. 37	-0.0261	0.440			
Cell Cycle		0.118	0.146	0.071	0.0934
-	-0.00229	-0.126	0.0151	0.258	0.127
DNA Repair	-0.149	-0.133	0.17	0.0413	0.00895
Endolysosome	-0.0531	0.0943	0.0798	0.0744	0.128
Epigenetic	-0.045	0.043	-0.00156	0.158	0.0749
Immune Response	0.0443	0.0798	0.0172	0.155	0.132
Lipid Metabolism	0.0775	0.171	0.133	0.194	0.263
Metal Binding and Homeostasis	-0.0208	0.0487	0.125	0.0963	0.117
Mitochondrial Metabolism	-0.0154	0.0748	-0.0227	0.0473	-0.0244
Myelination					
Oxidative Stress	0.106	0.3	0.291	0.226	0.344
Proteostasis	0.0652	0.2	0.207	0.177	0.255
RNA Spliceosome					
Structural Stabilization	-0.0115	0.0542	0.0193	0.186	0.0858
Synapse	-0.00908	0.0331	0.016	0.098	0.127
Tau Homeostasis					
Vasculature	-0.0308	0.164	0.168	-0.0143	0.146
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

NF-kappa B signaling pathway				
0.00471	-0.0189	-0.0317		

APP Metabolism     Autophagy	Apoptosis	-0.0249	0.00471	-0.0189	-0.0317	0.0196
Cell Cycle	APP Metabolism					
DNA Repair Endolysosome -0.0376 -0.0492 0.0115 0.0239 0.0165 Epigenetic -0.0635 0.0349 -0.0796 -0.128 -0.0544 Immune Response -0.0689 -0.0379 -0.0521 -0.0734 -0.0292 Lipid Metabolism -0.0529 -0.0144 0.00726 -0.0614 -0.0542 Metal Binding and Homeostasis -0.17 -0.0599 0.0551 -0.274 -0.0302 Mitochondrial Metabolism Myelination Oxidative Stress -0.135 0.0681 0.04 -0.105 0.108 Proteostasis -0.114 -0.0102 0.0105 -0.151 -0.0206  RNA Spliceosome Structural Stabilization -0.124 -0.0797 -0.00182 -0.0182 -0.0562 -0.0513  Tau Homeostasis Vasculature 0.0689 -0.066 0.0496 0.0655 0.0051	Autophagy	-0.111	0.0619	0.00555	-0.0807	0.117
Endolysosome	Cell Cycle	-0.123	0.0338	0.00103	-0.173	-0.0274
Epigenetic -0.0635 0.0349 -0.0796 -0.128 -0.0544  Immune Response -0.0689 -0.0379 -0.0521 -0.0734 -0.0292  Lipid Metabolism -0.0529 -0.0144 0.00726 -0.0614 -0.0542  Metal Binding and Homeostasis -0.17 -0.0599 0.0551 -0.274 -0.0302  Mitochondrial Metabolism -0.078 -0.228 -0.251 0.00608 -0.0319  Myelination  Oxidative Stress -0.135 0.0681 0.04 -0.105 0.108  Proteostasis -0.114 -0.0102 0.0105 -0.151 -0.0206  RNA Spliceosome  Structural Stabilization -0.124 -0.0797 -0.00182 -0.127 -0.0528  Synapse -0.0603 -0.155 -0.0942 -0.0562 -0.0381  Tau Homeostasis  Vasculature 0.0689 -0.056 0.0496 0.0655 0.0051	DNA Repair	0.0435	0.276	0.213	0.0175	0.133
Immune Response	Endolysosome	-0.0376	-0.0492	0.0115	0.0239	0.0165
Lipid Metabolism -0.0529 -0.0144 0.00726 -0.0614 -0.0542  Metal Binding and Homeostasis -0.17 -0.0599 0.0551 -0.274 -0.0302  Mitochondrial Metabolism -0.078 -0.228 -0.251 0.00608 -0.0319  Myelination  Oxidative Stress -0.135 0.0681 0.04 -0.105 0.108  Proteostasis -0.114 -0.0102 0.0105 -0.151 -0.0206  RNA Spliceosome  Structural Stabilization -0.124 -0.0797 -0.00182 -0.127 -0.0528  Synapse -0.0603 -0.155 -0.0942 -0.0562 -0.0381  Tau Homeostasis  Vasculature 0.0689 -0.056 0.0496 0.0655 0.0051	Epigenetic	-0.0635	0.0349	-0.0796	-0.128	-0.0544
Metal Binding and Homeostasis  -0.17 -0.0599 0.0551 -0.274 -0.0302  Mitochondrial Metabolism -0.078 -0.228 -0.251 0.00608 -0.0319  Myelination  Oxidative Stress -0.135 0.0681 0.04 -0.105 0.108  Proteostasis -0.114 -0.0102 0.0105 -0.151 -0.0206  RNA Spliceosome  Structural Stabilization -0.124 -0.0797 -0.00182 -0.127 -0.0528 Synapse -0.0603 -0.155 -0.0942 -0.0562 -0.0381  Tau Homeostasis Vasculature 0.0689 -0.056 0.0496 0.0655 0.0051	Immune Response	-0.0689	-0.0379	-0.0521	-0.0734	-0.0292
Mitochondrial Metabolism         -0.078         -0.228         -0.251         0.0608         -0.0319           Myelination           Oxidative Stress         -0.135         0.0681         0.04         -0.105         0.108           Proteostasis         -0.114         -0.0102         0.0105         -0.151         -0.0206           RNA Spliceosome           Structural Stabilization         -0.124         -0.0797         -0.00182         -0.127         -0.0528           Synapse         -0.0603         -0.155         -0.0942         -0.0562         -0.0381           Tau Homeostasis         Vasculature         0.0689         -0.056         0.0496         0.0655         0.0051	Lipid Metabolism	-0.0529	-0.0144	0.00726	-0.0614	-0.0542
Myelination         Oxidative Stress       -0.135       0.0681       0.04       -0.105       0.108         Proteostasis       -0.114       -0.0102       0.0105       -0.151       -0.0206         RNA Spliceosome         Structural Stabilization       -0.124       -0.0797       -0.00182       -0.127       -0.0528         Synapse       -0.0603       -0.155       -0.0942       -0.0562       -0.0381         Tau Homeostasis         Vasculature       0.0689       -0.056       0.0496       0.0655       0.0051	Metal Binding and Homeostasis	-0.17	-0.0599	0.0551	-0.274	-0.0302
Oxidative Stress	Mitochondrial Metabolism	-0.078	-0.228	-0.251	0.00608	-0.0319
Proteostasis -0.114 -0.0102 0.0105 -0.151 -0.0206  RNA Spliceosome  Structural Stabilization -0.124 -0.0797 -0.00182 -0.127 -0.0528  Synapse -0.0603 -0.155 -0.0942 -0.0562 -0.0381  Tau Homeostasis  Vasculature 0.0689 -0.056 0.0496 0.0655 0.0051	Myelination					
RNA Spliceosome  Structural Stabilization	Oxidative Stress	-0.135	0.0681	0.04	-0.105	0.108
Structural Stabilization         -0.124         -0.0797         -0.00182         -0.127         -0.0528           Synapse         -0.0603         -0.155         -0.0942         -0.0562         -0.0381           Tau Homeostasis           Vasculature         0.0689         -0.056         0.0496         0.0655         0.0051	Proteostasis	-0.114	-0.0102	0.0105	-0.151	-0.0206
Synapse -0.0603 -0.155 -0.0942 -0.0562 -0.0381  Tau Homeostasis  Vasculature 0.0689 -0.056 0.0496 0.0655 0.0051	RNA Spliceosome					
Tau Homeostasis  Vasculature  0.0689  -0.056  0.0496  0.0655  0.0051	Structural Stabilization	-0.124	-0.0797	-0.00182	-0.127	-0.0528
Vasculature 0.0689 -0.056 0.0496 0.0655 0.0051	Synapse	-0.0603	-0.155	-0.0942	-0.0562	-0.0381
	Tau Homeostasis					
WT/WT WT/FC FC/FC WT/VS VS/VS	Vasculature	0.0689	-0.056	0.0496	0.0655	0.0051
		WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### TNF signaling pathway

0.0929

0.167

0.128

0.214

0.213

0.133

0.105

0.0718

0.147

0.203

0.285

0.214

0.126

0.176

0.175

VS/VS

		I INI 3	signaling pa	iiiway
Apoptosis	-0.0158	0.182	0.155	-0.00754
APP Metabolism				
Autophagy	0.0766	0.375	0.305	0.0363
Cell Cycle	0.0325	0.311	0.314	0.0512
DNA Repair	-0.0196	0.309	0.332	-0.0883
Endolysosome	0.00431	0.216	0.249	0.0973
Epigenetic	0.0947	0.218	0.246	0.13
Immune Response	0.0149	0.152	0.155	0.0501
Lipid Metabolism	-0.0198	0.15	0.159	0.0158
Metal Binding and Homeostasis	-0.0875	0.2	0.186	-0.0457
Mitochondrial Metabolism	0.0531	0.31	0.266	0.061
Myelination				
Oxidative Stress	0.146	0.438	0.419	0.235
Proteostasis	0.115	0.207	0.233	0.203
RNA Spliceosome				
Structural Stabilization	-0.0089	0.127	0.168	0.0796
Synapse	0.0742	0.265	0.276	0.0638
Tau Homeostasis				
Vasculature	0.0972	0.25	0.318	0.168
	WT/WT	WT/FC	FC/FC	WT/VS

HIF-1	signaling	pathway

				-	
Apoptosis	-0.000741	0.102	0.131	0.0298	0.178
APP Metabolism					
Autophagy	0.0314	0.2	0.15	0.0519	0.161
Cell Cycle	0.116	0.25	0.256	0.136	0.359
DNA Repair	0.0243	0.152	0.304	-0.0228	0.198
Endolysosome	0.171	0.339	0.376	0.172	0.376
Epigenetic	0.00755	0.216	0.184	0.017	0.215
Immune Response	0.0221	0.0844	0.157	0.0489	0.197
Lipid Metabolism	0.017	0.135	0.133	0.0767	0.173
Metal Binding and Homeostasis	0.0542	0.0611	0.123	0.0799	0.152
Mitochondrial Metabolism	0.115	0.201	0.24	0.116	0.182
Myelination					
Oxidative Stress	0.0388	0.142	0.115	0.144	0.189
Proteostasis	0.145	0.221	0.183	0.167	0.214
RNA Spliceosome					
Structural Stabilization	0.0976	0.122	0.168	0.117	0.251
Synapse	0.0701	0.142	0.229	0.121	0.3
Tau Homeostasis					
Vasculature	-0.0277	0.142	0.167	0.0328	0.188
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### FoxO signaling pathway

			• • •	•	
Apoptosis	-0.0155	0.245	0.191	0.00114	0.188
APP Metabolism					
Autophagy	0.218	0.452	0.336	0.209	0.248
Cell Cycle	0.0805	0.188	0.195	0.121	0.139
DNA Repair	0.0232	0.232	0.24	0.0291	0.105
Endolysosome	0.213	0.272	0.349	0.252	0.394
Epigenetic	-0.0473	0.172	0.182	-0.0342	0.159
Immune Response	-0.00288	0.197	0.15	0.0161	0.181
Lipid Metabolism	0.0132	0.257	0.178	0.0515	0.239
Metal Binding and Homeostasis	0.0342	0.151	0.12	0.0291	0.186
Mitochondrial Metabolism	0.11	0.364	0.209	0.1	0.223
Myelination					
Oxidative Stress	0.158	0.546	0.386	0.169	0.299
Proteostasis	0.184	0.299	0.203	0.213	0.239
RNA Spliceosome					
Structural Stabilization	0.0568	0.242	0.254	0.0544	0.265
Synapse	0.124	0.319	0.283	0.0958	0.313
Tau Homeostasis					
Vasculature	0.027	0.292	0.21	0.0394	0.261
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Calciun	n signaling p	athway	
Apoptosis	0.0153	0.0406	0.106	0.128	0.119
APP Metabolism					
Autophagy	0.00117	0.0711	0.0921	-0.0288	-0.0174
Cell Cycle	0.0991	0.17	0.333	0.0247	0.298
DNA Repair					
Endolysosome	0.119	0.0835	0.243	0.174	0.164
Epigenetic	0.0732	0.245	0.22	0.0716	0.247
Immune Response	0.0188	0.0636	0.151	0.0449	0.154
Lipid Metabolism	0.00184	0.0438	0.152	0.0643	0.0859
letal Binding and Homeostasis	-0.0216	0.0687	0.228	-0.0704	0.0569
Mitochondrial Metabolism	-0.0765	-0.0479	0.0106	-0.0222	-0.0174

0.332

0.0395

0.0591

0.0712

0.0667

0.0909

WT/FC

0.415

0.252

0.153

0.241

0.215

0.243

FC/FC

0.209

0.0248

0.0611

0.0213

0.00435

0.0869

WT/VS

0.37

0.188

0.0621

0.164

0.11

0.171

VS/VS

0.217

0.0154

0.0122

0.0531

0.0319

0.0655

WT/WT

Myelination

**Proteostasis** 

Synapse

Vasculature

Oxidative Stress

RNA Spliceosome

Tau Homeostasis

Structural Stabilization

## Phosphatidylinositol signaling system -0.134 0.0456 -0.292

		-0.134	0.0456	-0.292	-0.142
APP Metabolism					
Autophagy	-0.0507	0.204	0.217	-0.132	0.072
Cell Cycle	0.0761	0.299	0.35	-0.0684	0.213
DNA Repair					
Endolysosome	-0.13	0.186	0.197	-0.177	0.048
Epigenetic					
Immune Response	0.0303	0.204	0.237	-0.0469	0.132
Lipid Metabolism	-0.0127	0.185	0.218	-0.0156	0.041
Metal Binding and Homeostasis	0.012	0.149	0.192	-0.0062	0.0365
Mitochondrial Metabolism	-0.178	0.0127	0.0649	-0.1	-0.0969
Myelination					
Oxidative Stress					
Proteostasis	-0.0222	0.176	0.251	-0.0162	0.0346
RNA Spliceosome					
Structural Stabilization	-0.00256	0.0431	0.199	-0.0767	0.0449
Synapse	-0.0529	0.111	0.152	-0.103	-0.0109
Tau Homeostasis					
Vasculature	0.0338	0.19	0.214	-0.0306	0.167
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

# Phospholipase D signaling pathway 0.12 0.143 0.154 0.247

			_	•	
Apoptosis	0.12	0.143	0.154	0.247	0.198
APP Metabolism					
Autophagy	0.294	0.174	0.361	0.408	0.26
Cell Cycle	0.0982	0.115	0.196	0.187	0.173
DNA Repair					
Endolysosome	0.179	0.147	0.233	0.2	0.201
Epigenetic	0.19	0.253	0.265	0.247	0.305
Immune Response	0.142	0.168	0.232	0.177	0.25
Lipid Metabolism	0.104	0.0999	0.171	0.179	0.145
Metal Binding and Homeostasis	0.0672	0.116	0.173	0.122	0.0222
Mitochondrial Metabolism	0.128	0.186	0.175	0.186	0.204
Myelination	0.405	0.235	0.251	0.448	0.277
Oxidative Stress	0.21	0.158	0.271	0.32	0.336
Proteostasis	0.198	0.202	0.28	0.276	0.251
RNA Spliceosome					
Structural Stabilization	0.179	0.2	0.29	0.2	0.236
Synapse	0.109	0.141	0.258	0.127	0.158
Tau Homeostasis					
Vasculature	0.136	0.162	0.263	0.153	0.246
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Sphingolipid signaling pathway				
0.264	0.125	0.0970		

Apoptosis	0.0538	0.264	0.135	0.0879	0.162
APP Metabolism					
Autophagy	0.155	0.203	0.291	0.283	0.223
Cell Cycle	0.195	0.355	0.272	0.249	0.294
DNA Repair	0.123	0.179	0.135	0.139	0.159
Endolysosome	0.115	0.198	0.183	0.183	0.243
Epigenetic	0.103	0.304	0.241	0.128	0.202
Immune Response	0.119	0.198	0.186	0.15	0.156
Lipid Metabolism	0.0508	0.227	0.0567	0.111	0.136
Metal Binding and Homeostasis	0.0353	0.223	0.129	0.0866	0.106
Mitochondrial Metabolism	0.109	0.322	0.196	0.118	0.203
Myelination	0.327	0.41	0.116	0.515	0.362
Oxidative Stress	0.133	0.286	0.222	0.331	0.224
Proteostasis	0.0895	0.207	0.0686	0.189	0.142
RNA Spliceosome					
Structural Stabilization	0.136	0.315	0.257	0.178	0.283
Synapse	0.148	0.287	0.241	0.189	0.231
Tau Homeostasis					
Vasculature	0.066	0.258	0.221	0.0667	0.195
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Anontosis

cAMP	signaling	pathway

Apoptosis	0.136	0.285	0.256	0.109	0.221
APP Metabolism	0.0674	0.386	0.52	-0.232	0.26
Autophagy	0.121	0.232	0.253	0.0979	0.226
Cell Cycle	0.16	0.315	0.316	0.155	0.323
DNA Repair					
Endolysosome	0.0895	0.238	0.294	-0.017	0.294
Epigenetic	0.125	0.315	0.309	0.125	0.191
Immune Response	0.0804	0.213	0.262	0.0648	0.166
Lipid Metabolism	0.0714	0.227	0.237	0.0773	0.167
Metal Binding and Homeostasis	0.0267	0.176	0.203	-0.0417	0.148
Mitochondrial Metabolism	0.0495	0.163	0.193	0.0337	0.183
Myelination	0.385	0.533	0.43	0.345	0.423
Oxidative Stress	0.365	0.561	0.567	0.345	0.426
Proteostasis	0.11	0.137	0.249	0.118	0.162
RNA Spliceosome					
Structural Stabilization	0.131	0.252	0.297	0.0829	0.237
Synapse	0.097	0.149	0.279	0.053	0.168
Tau Homeostasis					
Vasculature	0.068	0.218	0.278	0.0198	0.173
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

cGMP-PI	KG signaling	g pathway

Apoptosis	0.174	0.218	0.188	0.232	0.145
APP Metabolism					
Autophagy	0.189	0.343	0.236	0.104	0.222
Cell Cycle	0.156	0.409	0.335	0.109	0.354
DNA Repair					
Endolysosome	0.239	0.355	0.292	0.207	0.424
Epigenetic	0.257	0.408	0.437	0.259	0.416
Immune Response	0.128	0.255	0.28	0.109	0.232
Lipid Metabolism	0.0707	0.282	0.232	0.0547	0.178
Metal Binding and Homeostasis	0.0777	0.309	0.303	0.0238	0.21
Mitochondrial Metabolism	0.115	0.237	0.162	0.179	0.135
Myelination	0.535	0.598	0.428	0.48	0.527
Oxidative Stress	0.208	0.292	0.362	0.22	0.261
Proteostasis	0.162	0.209	0.175	0.246	0.139
RNA Spliceosome					
Structural Stabilization	0.143	0.29	0.262	0.156	0.339
Synapse	0.105	0.22	0.268	0.0845	0.155
Tau Homeostasis					
Vasculature	0.12	0.248	0.315	0.109	0.229
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

### PI3K-Akt signaling pathway

		PISK-A	Kt Signaling	patriway	
Apoptosis	-0.0106	0.191	0.167	0.0479	0.212
APP Metabolism	-0.0419	0.195	0.181	0.0399	0.163
Autophagy	0.0934	0.272	0.287	0.125	0.269
Cell Cycle	0.0996	0.246	0.251	0.123	0.261
DNA Repair	0.0921	0.203	0.317	0.115	0.23
Endolysosome	0.0496	0.145	0.215	0.129	0.276
Epigenetic	0.036	0.214	0.175	0.0746	0.241
Immune Response	0.0364	0.146	0.119	0.123	0.21
Lipid Metabolism	0.00485	0.163	0.143	0.0754	0.225
Metal Binding and Homeostasis	-0.0524	0.0965	0.0748	0.0404	0.129
Mitochondrial Metabolism	0.15	0.369	0.309	0.142	0.305
Myelination	0.0679	0.123	0.106	0.239	0.273
Oxidative Stress	0.082	0.317	0.301	0.102	0.304
Proteostasis	0.105	0.135	0.14	0.201	0.233
RNA Spliceosome					
Structural Stabilization	0.0452	0.118	0.153	0.102	0.214
Synapse	0.051	0.177	0.158	0.104	0.22
Tau Homeostasis					
Vasculature	0.0149	0.137	0.141	0.0725	0.213
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

### AMPK signaling pathway

APP Metabolism Autophagy Cell Cycle DNA Repair	0.14 0.122	0.326	0.313		
Cell Cycle		0.326	0.313		
·	0.122		0.010	0.181	0.22
DNA Repair		0.246	0.136	0.174	0.184
2					
Endolysosome	0.0831	0.262	0.227	0.107	0.248
Epigenetic	0.0919	0.294	0.298	0.187	0.235
Immune Response	0.0907	0.278	0.22	0.171	0.133
Lipid Metabolism	0.055	0.205	0.232	0.0963	0.121
letal Binding and Homeostasis	0.0227	0.208	0.127	0.0755	0.115
Mitochondrial Metabolism	0.0904	0.236	0.26	0.119	0.128
Myelination					
Oxidative Stress	-0.0634	0.461	0.43	-0.0145	0.301
Proteostasis	0.164	0.304	0.279	0.213	0.237
RNA Spliceosome					
Structural Stabilization	0.101	0.344	0.402	0.145	0.245
Synapse	0.112	0.286	0.303	0.119	0.137
Tau Homeostasis					
Vasculature	8.06e-05	0.235	0.203	0.0464	0.241
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### mTOR signaling pathway

Apoptosis	0.00436	0.238	0.113	-0.0101	0.134
APP Metabolism					
Autophagy	0.106	0.278	0.215	0.0869	0.00363
Cell Cycle	0.0437	0.129	0.0797	0.0497	0.0992
DNA Repair	0.258	0.312	0.382	0.126	0.124
Endolysosome	0.0436	0.0859	0.00966	0.0487	-0.0433
Epigenetic	0.00411	0.207	0.135	-0.00116	0.148
Immune Response	0.107	0.225	0.121	0.0626	0.16
Lipid Metabolism	0.0431	0.159	0.148	0.0158	0.125
Metal Binding and Homeostasis	-0.0264	0.226	0.0456	-0.0821	0.0748
Mitochondrial Metabolism	0.129	0.354	0.259	0.0554	0.151
Myelination	0.241	0.278	0.18	0.296	0.226
Oxidative Stress	0.232	0.515	0.321	0.184	0.313
Proteostasis	0.177	0.267	0.171	0.119	0.209
RNA Spliceosome					
Structural Stabilization	0.0264	0.156	0.0736	0.00996	0.0751
Synapse	0.104	0.236	0.178	0.0529	0.17
Tau Homeostasis					
Vasculature	0.00575	0.18	0.182	-0.000794	0.225
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### Neuroactive ligand-receptor interaction

Apoptosis					
Apoptosis	-0.00165	0.0266	0.00638	0.107	0.0892
APP Metabolism	0.0795	0.229	0.435	-0.215	0.235
Autophagy	-0.0293	-0.125	-0.0766	-0.0152	0.0988
Cell Cycle	0.037	0.00298	0.201	0.201	0.182
DNA Repair					
Endolysosome	-0.0287	0.00218	0.153	-0.0411	0.125
Epigenetic	0.0535	0.229	0.246	0.0711	0.153
Immune Response	-0.00688	0.0352	0.0618	0.0539	0.121
Lipid Metabolism	0.0635	0.1	0.0936	0.112	0.138
Metal Binding and Homeostasis	0.00701	0.0982	0.127	0.00642	0.178
Mitochondrial Metabolism	-0.0247	0.0939	0.0811	0.0768	0.134
Myelination					
Oxidative Stress	0.0681	-0.0665	0.0957	0.0675	0.0911
Proteostasis	0.00111	0.00722	0.154	-0.0282	0.11
RNA Spliceosome					
Structural Stabilization	0.00731	0.0614	0.187	-0.0952	0.145
Synapse	0.0622	0.0673	0.173	0.0586	0.146
Tau Homeostasis					
Vasculature	0.0169	0.0509	0.133	0.0666	0.162
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

### Cytokine–cytokine receptor interaction

Apoptosis APP Metabolism Autophagy	0.0205	0.0734	0.121	0.0472	0.153
Autophagy					
	-0.136	-0.144	-0.171	-0.000471	-0.0821
Cell Cycle	0.0391	0.114	0.268	0.144	0.334
DNA Repair					
Endolysosome	-0.0791	-0.0861	0.0138	-0.0451	0.0679
Epigenetic	-0.00915	0.0378	0.102	0.0705	0.0822
Immune Response	0.0374	0.0192	0.0197	0.0586	0.109
Lipid Metabolism	-0.0366	-0.0564	-0.0035	0.00787	0.158
Metal Binding and Homeostasis	-0.0692	0.166	0.348	-0.083	0.263
Mitochondrial Metabolism	0.0659	-0.069	-0.0288	-0.154	-0.00619
Myelination					
Oxidative Stress					
Proteostasis	0.105	0.125	0.126	0.113	0.198
RNA Spliceosome					
Structural Stabilization	-0.0403	-0.0205	0.0504	0.0103	0.131
Synapse	0.0827	0.103	0.137	0.12	0.225
Tau Homeostasis					
Vasculature	-0.0815	-0.124	0.062	-0.00177	0.0776
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Viral protein	interaction	with cytokin	e and cytok	ine recepto
Apoptosis	-0.0719	-0.22	0.0728	-0.0834	0.161
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response	-0.0271	-0.174	-0.0069	-0.0611	0.0958
Lipid Metabolism	-0.165	-0.241	0.0164	-0.128	0.252
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.144	0.0116	0.0697	0.232	0.315
RNA Spliceosome					
Structural Stabilization	-0.0369	-0.236	0.116	-0.129	0.218
Synapse	-0.0648	-0.113	0.187	-0.0245	0.262
Tau Homeostasis					
Vasculature	-0.186	-0.4	0.0225	-0.194	0.0285
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		ECM-r	eceptor inte	raction	
Apoptosis	-0.109	0.27	0.181	-0.0665	0.143
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome	-0.0167	-0.0135	0.148	0.163	0.2
Epigenetic					
Immune Response	-0.135	-0.0124	-0.0118	0.058	0.0698
Lipid Metabolism	-0.152	-0.0341	0.0253	-0.0503	0.0838
letal Binding and Homeostasis	-0.0963	-0.141	-0.00427	0.0759	0.0459
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.0492	-0.0767	0.0256	0.202	0.167
RNA Spliceosome					
Structural Stabilization	-0.0266	-0.075	0.0362	0.0909	0.102
Synapse	-0.0455	0.0172	0.114	-0.00658	0.118
Tau Homeostasis					
Vasculature	-0.14	-0.101	0.0434	0.0288	0.0883
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### Cell adhesion molecules

Δ .					
Apoptosis	-0.0405	0.00159	0.19	-0.0535	0.177
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome	-0.071	0.0957	0.192	-0.0438	0.104
Epigenetic					
Immune Response	-0.0403	0.0554	0.181	0.0231	0.175
Lipid Metabolism	-0.0111	0.0783	0.226	-0.0228	0.224
Metal Binding and Homeostasis	-0.0692	0.0222	0.215	0.036	0.141
Mitochondrial Metabolism					
Myelination	0.046	0.211	0.284	0.0999	0.137
Oxidative Stress					
Proteostasis	-0.0865	0.0136	0.086	-0.0536	0.000839
RNA Spliceosome					
Structural Stabilization	-0.0581	0.0978	0.217	0.00581	0.134
Synapse	0.0181	0.179	0.357	-0.0164	0.243
Tau Homeostasis					
Vasculature	-0.0478	0.182	0.251	0.0588	0.197
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

APP Metabolism Autophagy Cell Cycle DNA Repair Endolysosome Epigenetic	0.0255 0.137 0.0707 0.0964 0.0789	0.419 0.357 0.255 0.256	0.276 0.246 0.146	-0.0197 0.255 0.106	0.0624 0.217 0.157
Cell Cycle DNA Repair Endolysosome Epigenetic	0.0707 0.0964 0.0789	0.255	0.146	0.106	0.157
DNA Repair Endolysosome Epigenetic	0.0964	0.256	0.182		
Endolysosome Epigenetic	0.0789			0.119	0.129
Epigenetic	0.0789			0.119	0.129
		0.217			
Inches Decreases	0.070		0.169	0.07	0.261
Immune Response	0.073	0.241	0.257	0.109	0.274
Lipid Metabolism	0.0616	0.211	0.154	0.112	0.156
Metal Binding and Homeostasis	0.0616	0.105	0.0766	-0.00904	0.0934
Mitochondrial Metabolism	0.241	0.433	0.335	0.294	0.446
Myelination					
Oxidative Stress	0.228	0.247	0.371	0.337	0.398
Proteostasis	0.0911	0.235	0.167	0.142	0.124
RNA Spliceosome					
Structural Stabilization	0.0555	0.155	0.108	0.0934	0.114
Synapse	0.135	0.235	0.234	0.154	0.229
Tau Homeostasis					
Vasculature	0.129	0.287	0.301	0.0465	0.233
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

			Phagosome		
Apoptosis	0.06	0.183	0.249	0.148	0.245
APP Metabolism	-0.0147	0.172	0.387	0.0547	0.479
Autophagy	0.101	0.223	0.221	0.124	0.211
Cell Cycle	0.216	0.151	0.248	0.351	-0.00755
DNA Repair					
Endolysosome	0.11	0.216	0.238	0.126	0.182
Epigenetic					
Immune Response	0.16	0.215	0.233	0.198	0.266
Lipid Metabolism	-0.00398	0.126	0.228	0.0581	0.28
etal Binding and Homeostasis	0.079	0.125	0.186	0.166	0.141
Mitochondrial Metabolism	0.143	0.219	0.221	0.163	0.157
Myelination					
Oxidative Stress	-0.00623	0.00155	0.0423	-0.0519	0.262
Proteostasis	0.125	0.284	0.26	0.0963	0.185

0.131

0.145

0.0239

WT/WT

0.106

0.273

0.0963

WT/FC

0.198

0.281

0.303

FC/FC

0.191

0.14

0.0115

WT/VS

0.115

0.18

0.188

VS/VS

**RNA Spliceosome** 

Tau Homeostasis

Synapse

Vasculature

Structural Stabilization

Lysosome	

			Lysosome		
Apoptosis	0.0786	0.0681	-0.0548	0.136	0.106
APP Metabolism					
Autophagy	0.22	0.163	0.261	0.239	0.179
Cell Cycle					
DNA Repair					
Endolysosome	0.132	0.143	0.0996	0.212	0.064
Epigenetic					
Immune Response	0.138	0.124	0.0895	0.172	0.155
Lipid Metabolism	0.137	0.183	0.0395	0.234	0.0446
Metal Binding and Homeostasis	0.196	0.186	0.261	0.184	0.052
Mitochondrial Metabolism	0.0963	-0.0304	0.0535	0.0998	0.0713
Myelination					
Oxidative Stress					
Proteostasis	0.139	0.186	0.152	0.196	0.0436
RNA Spliceosome					
Structural Stabilization	0.101	0.0399	0.0211	0.219	0.0457
Synapse	0.124	0.215	0.23	0.117	0.0592
Tau Homeostasis					
Vasculature	0.168	-0.147	-0.0636	0.214	-0.00792
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

			D '		
			Peroxisome		
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism	0.0849	0.254	0.133	0.163	0.143
Metal Binding and Homeostasis	0.091	0.139	-0.0405	0.155	0.117
Mitochondrial Metabolism	0.0808	0.219	0.121	0.234	0.13
Myelination					
Oxidative Stress	0.0844	0.162	0.0246	0.198	0.0928
Proteostasis	0.0608	0.145	0.00182	0.122	0.0923
RNA Spliceosome					
Structural Stabilization					
Synapse	0.11	0.158	0.0591	0.173	0.00976
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS
					<b>-</b>

#### Autophagy – animal

APP Metabolism Autophagy Cell Cycle DNA Repair Endolysosome Epigenetic Immune Response Lipid Metabolism	0.0585 -0.0355 0.167 0.0638 0.0936 0.0394	0.225 0.0216 0.183 0.195 0.37	0.166 0.0593 0.185 0.203 0.159	0.0853 0.0586 0.16 0.0743 0.0445	-0.00873 -0.00155 0.15 -0.0231
Cell Cycle DNA Repair Endolysosome Epigenetic Immune Response	-0.0355 0.167 0.0638 0.0936 0.0394	0.0216 0.183 0.195 0.37	0.0593 0.185 0.203 0.159	0.0586 0.16 0.0743 0.0445	-0.00155 0.15 -0.0231
DNA Repair Endolysosome Epigenetic Immune Response	0.167 0.0638 0.0936 0.0394	0.183 0.195 0.37	0.185 0.203 0.159	0.16 0.0743 0.0445	0.15 -0.0231
Endolysosome Epigenetic Immune Response	0.0638 0.0936 0.0394	0.195	0.203	0.0743 0.0445	-0.0231
Epigenetic Immune Response	0.0936 0.0394	0.37	0.159	0.0445	
Immune Response	0.0394				0.187
·		0.16	0.159	0.0500	
Lipid Motabolism	0.108			0.0309	0.0263
Lipid Metabolisiti		0.275	0.246	0.12	0.0681
Metal Binding and Homeostasis	-0.00345	0.253	0.0875	-0.00885	-0.0472
Mitochondrial Metabolism	0.144	0.296	0.207	0.156	0.0765
Myelination	0.239	0.25	0.22	0.311	0.259
Oxidative Stress	0.0835	0.377	0.297	0.065	0.205
Proteostasis	0.1	0.218	0.144	0.14	0.0266
RNA Spliceosome					
Structural Stabilization	-0.00856	0.076	0.109	0.054	0.00598
Synapse	0.0823	0.22	0.186	0.128	0.0502
Tau Homeostasis					
Vasculature	-0.0466	0.328	0.241	-0.109	0.00407
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Aut	ophagy – o	other

		Aut	ophagy – ot	ner	
Apoptosis	0.0665	-0.0546	-0.0375	0.0817	-0.253
APP Metabolism					
Autophagy	0.207	0.208	0.229	0.219	0.0292
Cell Cycle					
DNA Repair					
Endolysosome	0.22	0.224	0.374	0.187	0.0455
Epigenetic					
Immune Response	-0.0526	0.014	0.128	-0.0655	-0.207
Lipid Metabolism	0.18	0.191	0.296	0.164	0.0164
Metal Binding and Homeostasis					
Mitochondrial Metabolism	0.169	0.084	0.0626	0.197	-0.128
Myelination					
Oxidative Stress					
Proteostasis	0.159	0.0976	0.102	0.166	-0.095
RNA Spliceosome					
Structural Stabilization					
Synapse	0.0493	0.138	0.306	0.17	-0.104
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### Mitophagy – animal

		141110	priagy arr		
Apoptosis	0.194	0.37	0.258	0.256	0.129
APP Metabolism					
Autophagy	0.221	0.256	0.148	0.279	0.01
Cell Cycle	0.0934	0.127	0.0517	0.273	0.0399
DNA Repair					
Endolysosome	0.315	0.299	0.221	0.429	0.108
Epigenetic	0.12	0.294	0.208	0.137	0.0748
Immune Response	0.181	0.373	0.25	0.213	0.0873
Lipid Metabolism	0.259	0.289	0.238	0.275	0.153
Metal Binding and Homeostasis	0.107	0.399	0.188	0.205	0.0831
Mitochondrial Metabolism	0.147	0.216	0.158	0.22	0.0599
Myelination					
Oxidative Stress	0.325	0.566	0.363	0.394	0.243
Proteostasis	0.162	0.319	0.219	0.237	0.104
RNA Spliceosome					
Structural Stabilization	0.181	0.0556	0.0572	0.254	0.0471
Synapse	0.272	0.368	0.235	0.341	0.135
Tau Homeostasis					
Vasculature	0.113	0.35	0.307	0.273	0.0221
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS
	VV 1 / VV 1	W I/FC	FC/FC	W1/VS	V5/V5

#### Efferocytosis

			Lileiocytosis	•	
Apoptosis	-0.00846	0.143	0.0977	0.0532	0.113
APP Metabolism					
Autophagy	-0.00102	0.15	0.164	0.0641	0.138
Cell Cycle	0.0297	0.181	0.175	0.126	0.155
DNA Repair	0.0847	0.22	0.173	0.267	-0.0197
Endolysosome	0.106	0.227	0.259	0.111	0.183
Epigenetic	0.0264	0.0799	0.138	0.0682	0.153
Immune Response	0.0748	0.159	0.163	0.142	0.229
Lipid Metabolism	0.0602	0.22	0.197	0.141	0.249
Metal Binding and Homeostasis	0.0249	0.168	0.173	0.0637	0.132
Mitochondrial Metabolism	0.166	0.243	0.185	0.226	0.218
Myelination					
Oxidative Stress	0.0323	0.334	0.34	0.0581	0.307
Proteostasis	0.105	0.276	0.261	0.15	0.262
RNA Spliceosome					
Structural Stabilization	0.089	0.195	0.19	0.113	0.268
Synapse	0.161	0.27	0.33	0.174	0.266
Tau Homeostasis					
Vasculature	0.0241	0.147	0.163	0.0946	0.23
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS
4					

			Cell Cycle		
Apoptosis	0.0176	0.183	0.151	0.0684	0.125
APP Metabolism					
Autophagy					
Cell Cycle	-0.00192	0.11	0.0437	0.0202	0.00356
DNA Repair	-0.0585	0.0129	0.0464	-0.0161	-0.00561
Endolysosome					
Epigenetic	-0.0494	0.0551	0.0667	0.000645	0.0529
Immune Response	-0.0204	0.0392	0.0534	0.0217	0.0928
Lipid Metabolism	0.106	0.318	0.262	0.145	0.187
Metal Binding and Homeostasis	-0.0549	-0.0891	-0.0165	-0.0108	-0.0383
Mitochondrial Metabolism	0.00204	0.172	0.249	0.0857	0.108
Myelination					
Oxidative Stress	-0.0681	-0.0155	-0.0216	0.062	-0.0324
Proteostasis	-0.0262	0.0444	-0.00663	-0.0132	0.0159
RNA Spliceosome					
Structural Stabilization	-0.0324	0.125	0.0372	-0.0582	0.0482
Synapse	0.0628	0.3	0.2	0.044	0.138
Tau Homeostasis					
Vasculature	0.0498	0.0651	0.0797	0.162	0.155
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Oocyte meiosis

			,		
Apoptosis	-0.0057	0.258	0.278	-0.107	0.199
APP Metabolism					
Autophagy					
Cell Cycle	0.0382	0.147	0.0875	0.0067	-0.0092
DNA Repair	-0.0274	0.112	-0.0412	-0.0183	-0.0452
Endolysosome	0.473	0.562	0.851	0.27	0.507
Epigenetic	0.122	0.438	0.346	0.0241	0.312
Immune Response	0.0292	0.242	0.175	-0.0148	0.145
Lipid Metabolism	0.00232	0.349	0.317	-0.0807	0.168
Metal Binding and Homeostasis	0.0407	0.236	0.185	0.052	0.174
Mitochondrial Metabolism	-0.00701	0.223	0.214	0.00366	0.11
Myelination					
Oxidative Stress					
Proteostasis	-0.00823	0.101	0.0868	-0.0387	0.00108
RNA Spliceosome					
Structural Stabilization	0.0796	0.209	0.237	-0.00714	0.101
Synapse	0.0745	0.322	0.289	0.0295	0.179
Tau Homeostasis					
Vasculature	0.128	0.367	0.499	0.00166	0.405
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Apoptosis	

Apoptosis 0.0345 0.115 0.028 0.0788 0.0337  APP Metabolism  Autophagy 0.158 0.232 0.207 0.217 0.137  Cell Cycle 0.221 0.207 0.196 0.293 0.0954  DNA Repair 0.193 0.181 0.158 0.137 0.0767  Endolysosome 0.174 0.103 0.113 0.296 0.153  Epigenetic 0.129 0.276 0.156 0.19 0.106  Immune Response 0.0587 0.101 0.0355 0.149 0.071  Lipid Metabolism 0.052 0.163 0.0702 0.174 0.0823  Metal Binding and Homeostasis 0.107 0.215 0.0961 0.206 0.035  Mitochondrial Metabolism 0.107 0.172 0.0706 0.149 0.107  Myelination 0.324 0.354 0.195 0.573 0.389  Oxidative Stress 0.0566 0.3 0.151 0.215 0.0896  Proteostasis 0.118 0.19 0.0897 0.191 0.112  RNA Spliceosome  Structural Stabilization 0.103 0.164 0.0617 0.225 0.0847  Synapse 0.154 0.199 0.135 0.246 0.22  Tau Homeostasis  Vasculature 0.192 0.358 0.239 0.214 0.145  WT/WT WT/FC FC/FC WT/VS VS/VS				, thobroom		
Autophagy Cell Cycle 0.221 0.207 0.196 0.293 0.0954  DNA Repair Endolysosome 0.174 0.193 0.181 0.193 0.113 0.296 0.153  Epigenetic 0.129 0.276 0.156 0.19 0.156 0.19 0.106  Immune Response Lipid Metabolism 0.052 0.163 0.107 0.107 0.107 0.108  Mitochondrial Metabolism 0.107 0.107 0.172 0.0706 0.149 0.007  Myelination 0.324 0.354 0.195 0.307 0.360 0.151 0.208 0.389  Oxidative Stress 0.0566 0.3 0.151 0.295 0.191 0.295 0.399 0.191 0.112  RNA Spliceosome  Structural Stabilization Synapse 0.154 0.192 0.358 0.239 0.214 0.145	Apoptosis	0.0345	0.115	0.028	0.0788	0.0337
Cell Cycle         0.221         0.207         0.196         0.293         0.0954           DNA Repair         0.193         0.181         0.158         0.137         0.0767           Endolysosome         0.174         0.103         0.113         0.298         0.153           Epigenetic         0.129         0.276         0.156         0.19         0.106           Immune Response         0.0587         0.101         0.0355         0.149         0.071           Lipid Metabolism         0.052         0.163         0.0702         0.174         0.0823           Metal Binding and Homeostasis         0.107         0.215         0.0961         0.208         0.035           Mitochondrial Metabolism         0.107         0.172         0.0706         0.149         0.107           Myelination         0.324         0.354         0.195         0.573         0.389           Oxidative Stress         0.0566         0.3         0.151         0.215         0.0996           Proteostasis         0.118         0.19         0.0897         0.191         0.112           RNA Spliceosome         0.154         0.199         0.135         0.246         0.22           Tau Homeostas	APP Metabolism					
DNA Repair Endolysosome 0.174 0.193 0.181 0.193 0.113 0.296 0.153 Epigenetic 0.129 0.276 0.156 0.19 0.108 Immune Response 0.0587 0.101 0.0355 0.149 0.071 Lipid Metabolism 0.052 0.163 0.0702 0.174 0.0823 Metal Binding and Homeostasis 0.107 0.215 0.0961 0.208 0.107 Myelination 0.324 0.354 0.195 0.390 0.161 0.215 0.0966 0.3 0.151 0.215 0.0996 Proteostasis 0.118 0.19 0.0897 0.191 0.112 RNA Spliceosome Structural Stabilization 0.103 0.164 0.0617 0.225 0.0947 Synapse 0.154 0.199 0.135 0.239 0.214 0.145	Autophagy	0.158	0.232	0.207	0.217	0.137
Endolysosome Epigenetic 0.129 0.276 0.156 0.19 0.106 Immune Response 0.0587 0.101 0.0355 0.149 0.071 Lipid Metabolism 0.052 0.163 0.0702 0.174 0.0823 Metal Binding and Homeostasis 0.107 0.215 0.0961 0.208 0.035 Mitochondrial Metabolism 0.107 0.172 0.0706 0.149 0.107 Myelination 0.324 0.354 0.195 0.573 0.389  Oxidative Stress 0.0566 0.3 0.151 0.215 0.0996 Proteostasis 0.118 0.19 0.0897 0.191 0.112 RNA Spliceosome Structural Stabilization 0.103 0.164 0.0617 0.225 0.0947 Synapse 0.154 0.199 0.135 0.246 0.22 Tau Homeostasis Vasculature 0.192 0.358 0.239 0.214 0.145	Cell Cycle	0.221	0.207	0.196	0.293	0.0954
Epigenetic 0.129 0.276 0.156 0.19 0.106  Immune Response 0.0587 0.101 0.0355 0.149 0.071  Lipid Metabolism 0.052 0.163 0.0702 0.174 0.0823  Metal Binding and Homeostasis 0.107 0.215 0.0961 0.208 0.035  Mitochondrial Metabolism 0.107 0.172 0.0706 0.149 0.107  Myelination 0.324 0.354 0.195 0.573 0.389  Oxidative Stress 0.0566 0.3 0.151 0.215 0.0996  Proteostasis 0.118 0.19 0.0897 0.191 0.112  RNA Spliceosome  Structural Stabilization 0.103 0.164 0.0617 0.225 0.0947  Synapse 0.154 0.199 0.135 0.246 0.22  Tau Homeostasis  Vasculature 0.192 0.358 0.239 0.214 0.145	DNA Repair	0.193	0.181	0.158	0.137	0.0767
Immune Response         0.0587         0.101         0.0355         0.149         0.071           Lipid Metabolism         0.052         0.163         0.0702         0.174         0.0823           Metal Binding and Homeostasis         0.107         0.215         0.0961         0.208         0.035           Mitochondrial Metabolism         0.107         0.172         0.0706         0.149         0.107           Myelination         0.324         0.354         0.195         0.573         0.389           Oxidative Stress         0.0566         0.3         0.151         0.215         0.0996           Proteostasis         0.118         0.19         0.0897         0.191         0.112           RNA Spliceosome         Structural Stabilization         0.103         0.164         0.0617         0.225         0.0947           Synapse         0.154         0.199         0.135         0.246         0.22           Tau Homeostasis         Vasculature         0.192         0.358         0.239         0.214         0.145	Endolysosome	0.174	0.103	0.113	0.296	0.153
Lipid Metabolism  0.052  0.163  0.0702  0.174  0.0823  Metal Binding and Homeostasis  0.107  0.215  0.0961  0.208  0.035  Mitochondrial Metabolism  0.107  0.172  0.0706  0.149  0.107  Myelination  0.324  0.354  0.195  0.305  Proteostasis  0.118  0.19  0.0897  0.191  0.112  RNA Spliceosome  Structural Stabilization  Synapse  0.154  0.199  0.135  0.225  0.0947  Synapse  0.154  0.199  0.135  0.226  Tau Homeostasis  Vasculature  0.192  0.358  0.239  0.214  0.174  0.0823  0.0823  0.0823  0.0961  0.0961  0.097  0.199  0.107  0.0961  0.0961  0.097  0.199  0.195  0.0947  0.225  0.0947  0.199  0.135  0.246  0.22	Epigenetic	0.129	0.276	0.156	0.19	0.106
Metal Binding and Homeostasis         0.107         0.215         0.0961         0.208         0.035           Mitochondrial Metabolism         0.107         0.172         0.0706         0.149         0.107           Myelination         0.324         0.354         0.195         0.573         0.389           Oxidative Stress         0.0566         0.3         0.151         0.215         0.0996           Proteostasis         0.118         0.19         0.0897         0.191         0.112           RNA Spliceosome         Structural Stabilization         0.103         0.164         0.0617         0.225         0.0947           Synapse         0.154         0.199         0.135         0.246         0.22           Tau Homeostasis         Vasculature         0.192         0.358         0.239         0.214         0.145	Immune Response	0.0587	0.101	0.0355	0.149	0.071
Mitochondrial Metabolism         0.107         0.172         0.0706         0.149         0.107           Myelination         0.324         0.354         0.195         0.573         0.389           Oxidative Stress         0.0566         0.3         0.151         0.215         0.0996           Proteostasis         0.118         0.19         0.0897         0.191         0.112           RNA Spliceosome         Structural Stabilization         0.103         0.164         0.0617         0.225         0.0947           Synapse         0.154         0.199         0.135         0.246         0.22           Tau Homeostasis         Vasculature         0.192         0.358         0.239         0.214         0.145	Lipid Metabolism	0.052	0.163	0.0702	0.174	0.0823
Myelination       0.324       0.354       0.195       0.573       0.389         Oxidative Stress       0.0566       0.3       0.151       0.215       0.0996         Proteostasis       0.118       0.19       0.0897       0.191       0.112         RNA Spliceosome         Structural Stabilization       0.103       0.164       0.0617       0.225       0.0947         Synapse       0.154       0.199       0.135       0.246       0.22         Tau Homeostasis         Vasculature       0.192       0.358       0.239       0.214       0.145	Metal Binding and Homeostasis	0.107	0.215	0.0961	0.208	0.035
Oxidative Stress         0.0566         0.3         0.151         0.215         0.0996           Proteostasis         0.118         0.19         0.0897         0.191         0.112           RNA Spliceosome         Structural Stabilization           Synapse         0.103         0.164         0.0617         0.225         0.0947           Synapse         0.154         0.199         0.135         0.246         0.22           Tau Homeostasis         Vasculature         0.192         0.358         0.239         0.214         0.145	Mitochondrial Metabolism	0.107	0.172	0.0706	0.149	0.107
Proteostasis       0.118       0.19       0.0897       0.191       0.112         RNA Spliceosome       Structural Stabilization         Synapse       0.103       0.164       0.0617       0.225       0.0947         Synapse       0.154       0.199       0.135       0.246       0.22         Tau Homeostasis         Vasculature       0.192       0.358       0.239       0.214       0.145	Myelination	0.324	0.354	0.195	0.573	0.389
RNA Spliceosome Structural Stabilization 0.103 0.164 0.0617 0.225 0.0947  Synapse 0.154 0.199 0.135 0.246 0.22  Tau Homeostasis  Vasculature 0.192 0.358 0.239 0.214 0.145	Oxidative Stress	0.0566	0.3	0.151	0.215	0.0996
Structural Stabilization         0.103         0.164         0.0617         0.225         0.0947           Synapse         0.154         0.199         0.135         0.246         0.22           Tau Homeostasis         Vasculature         0.192         0.358         0.239         0.214         0.145	Proteostasis	0.118	0.19	0.0897	0.191	0.112
Synapse         0.154         0.199         0.135         0.246         0.22           Tau Homeostasis         Vasculature         0.192         0.358         0.239         0.214         0.145	RNA Spliceosome					
Tau Homeostasis  Vasculature  0.192  0.358  0.239  0.214  0.145	Structural Stabilization	0.103	0.164	0.0617	0.225	0.0947
Vasculature 0.192 0.358 0.239 0.214 0.145	Synapse	0.154	0.199	0.135	0.246	0.22
	Tau Homeostasis					
WT/WT WT/FC FC/FC WT/VS VS/VS	Vasculature	0.192	0.358	0.239	0.214	0.145
		WT/WT	WT/FC	FC/FC	WT/VS	VS/VS
		WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Apoptosis – multiple species				
Apoptosis	0.0733	0.158	0.124	0.132	0.148
APP Metabolism					
Autophagy					
Cell Cycle	-0.0249	0.0467	0.0829	0.127	-0.00911
DNA Repair	0.276	0.245	0.251	0.339	0.287
Endolysosome					
Epigenetic					
Immune Response	-0.0111	0.103	0.0718	0.133	0.0971
Linid Matabaliam					

Epigenetic					
Immune Response	-0.0111	0.103	0.0718	0.133	0.0971
Lipid Metabolism	0.16	0.228	0.0879	0.264	0.135
Metal Binding and Homeostasis					
Mitochondrial Metabolism	0.136	0.135	0.0929	0.24	0.168
Myelination					
Oxidative Stress	-0.109	0.0906	0.118	0.138	0.0284

Linial Matakaskas					
Lipid Metabolism	0.16	0.228	0.0879	0.264	0.135
Metal Binding and Homeostasis					
Mitochondrial Metabolism	0.136	0.135	0.0929	0.24	0.168
Myelination					
Oxidative Stress	-0.109	0.0906	0.118	0.138	0.0284
Proteostasis	0.0881	0.13	0.0964	0.144	0.135
RNA Spliceosome					
Structural Stabilization					
Synapse	0.274	0.304	0.224	0.361	0.37
Tau Homeostasis					

Oxidative Stress	-0.109	0.0906	0.118	0.138	0.0284
Proteostasis	0.0881	0.13	0.0964	0.144	0.135
RNA Spliceosome					
Structural Stabilization					
Synapse	0.274	0.304	0.224	0.361	0.37
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Ferroptosis						
0.068	0.333	0.258	0.0789	0.125		
0.044	0.0873	0.0732	0.12	0.0521		
0.0887	0.344	0.168	0.121	0.2		
0.0917	0.342	0.23	0.0925	0.168		
0.0322	0.172	0.0803	0.024	0.0912		
0.0343	0.329	0.114	0.0974	0.135		
	0.044 0.0887 0.0917 0.0322	0.044     0.0873       0.0887     0.344       0.0917     0.342       0.0322     0.172	0.068     0.333     0.258       0.044     0.0873     0.0732       0.0887     0.344     0.168       0.0917     0.342     0.23       0.0322     0.172     0.0803	0.068     0.333     0.258     0.0789       0.044     0.0873     0.0732     0.12       0.0887     0.344     0.168     0.121       0.0917     0.342     0.23     0.0925       0.0322     0.172     0.0803     0.024		

0.112

0.0467

0.184

-0.0491

WT/WT

0.284

0.301

0.182

0.362

WT/FC

0.0717

0.163

0.0911

0.0295

FC/FC

0.0595

0.0595

0.309

-0.0449

WT/VS

0.197

0.157

0.0461

0.168

VS/VS

Myelination

**Proteostasis** 

Synapse

Vasculature

Oxidative Stress

RNA Spliceosome

Tau Homeostasis

Structural Stabilization

Necroptosis	

			Necropiosis	•	
Apoptosis	0.0203	0.146	0.0484	0.0792	0.0878
APP Metabolism					
Autophagy	0.146	0.25	0.0191	0.161	0.0593
Cell Cycle	0.135	0.204	0.116	0.187	0.169
DNA Repair	0.336	0.242	0.0796	0.359	0.366
Endolysosome	0.172	0.288	0.175	0.23	0.192
Epigenetic	0.0912	0.232	0.119	0.143	0.157
Immune Response	-0.00363	0.0835	0.0405	0.0699	0.1
Lipid Metabolism	-0.0409	0.115	-0.0584	0.108	0.024
Metal Binding and Homeostasis	0.0436	0.113	0.101	0.0766	0.17
Mitochondrial Metabolism	0.017	0.111	-0.0881	0.128	0.0241
Myelination					
Oxidative Stress	-0.0825	0.179	0.117	-0.0544	0.119
Proteostasis	0.00186	0.116	-0.0238	0.066	0.0914
RNA Spliceosome					
Structural Stabilization	0.0255	0.141	0.0442	0.107	0.104
Synapse	0.104	0.301	0.169	0.136	0.243
Tau Homeostasis					
Vasculature	-0.0562	0.239	0.15	-0.0827	0.197
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

### p53 signaling pathway

0.295		
0.295		
0.233	0.248	0.0789
0.111	0.135	0.141
0.111	0.191	0.172
0.43	0.284	0.256
0.00101	0.044	0.105
0.027	0.268	0.199
0.233	0.312	0.238
-0.0481	0.0908	0.101
0.0813	0.269	0.223
0.297	0.186	0.226
-0.0928	0.17	0.0496
0.0133	0.124	0.144
0.211	0.449	0.434
0.191	0.34	0.37
FC/FC	WT/VS	VS/VS
	0.111  0.43  0.00101  0.027  0.233  -0.0481  0.0813  0.297  -0.0928  0.0133  0.211	0.111     0.135       0.111     0.191       0.43     0.284       0.00101     0.044       0.027     0.268       0.233     0.312       -0.0481     0.0908       0.0813     0.269       0.297     0.186       -0.0928     0.17       0.0133     0.124       0.211     0.449       0.191     0.34

#### Cellular senescence

		Celli	ulai sellesce	FIICE	
Apoptosis	-0.0147	0.114	0.0536	0.0505	0.0934
APP Metabolism					
Autophagy	0.153	0.316	0.217	0.181	0.0579
Cell Cycle	0.0497	0.126	0.0866	0.0852	0.106
DNA Repair	-0.0712	0.00609	0.0169	-0.0284	-0.0328
Endolysosome	0.289	0.337	0.323	0.321	0.317
Epigenetic	-0.00265	0.0686	0.0351	0.071	0.0602
Immune Response	0.047	0.125	0.0857	0.136	0.117
Lipid Metabolism	-0.0304	0.157	0.112	0.0512	0.0917
Metal Binding and Homeostasis	0.161	0.299	0.186	0.242	0.321
Mitochondrial Metabolism	0.0884	0.197	0.0288	0.155	0.0368
Myelination	0.353	0.36	0.257	0.354	0.303
Oxidative Stress	0.198	0.351	0.312	0.241	0.234
Proteostasis	0.0696	0.131	0.0542	0.157	0.15
RNA Spliceosome					
Structural Stabilization	0.0506	0.141	0.165	0.0792	0.204
Synapse	0.123	0.222	0.124	0.122	0.147
Tau Homeostasis					
Vasculature	0.037	0.202	0.22	0.0707	0.189
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		F	ocal adhesio	n
Apoptosis	0.0452	0.214	0.251	

0.274

0.0485

Apoptosis	0.0432	0.214	0.231	0.0405	0.274
APP Metabolism					
Autophagy	0.244	0.334	0.385	0.234	0.374
Cell Cycle	0.0366	0.205	0.255	0.115	0.371
DNA Repair	0.181	0.247	0.341	0.23	0.317
Endolysosome	0.192	0.245	0.29	0.258	0.387
Epigenetic	0.133	0.239	0.335	0.165	0.407
Immune Response	0.0846	0.18	0.201	0.14	0.262
Lipid Metabolism	0.0194	0.162	0.197	0.0594	0.247
Metal Binding and Homeostasis	-0.0596	0.00257	-0.0154	0.0371	0.0991
Mitochondrial Metabolism	0.134	0.362	0.386	0.117	0.405
Myelination	0.0501	0.0982	0.0857	0.23	0.299
Oxidative Stress	0.17	0.374	0.374	0.288	0.425
Proteostasis	0.152	0.144	0.194	0.246	0.308
RNA Spliceosome					
Structural Stabilization	0.0524	0.0634	0.133	0.121	0.211
Synapse	0.0473	0.154	0.205	0.0502	0.248
Tau Homeostasis					
Vasculature	0.0257	0.0989	0.154	0.0721	0.194
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### Adherens junction

Apoptosis	-0.0101	0.0716	0.0949	-0.0244	0.257
APP Metabolism					
Autophagy	0.16	0.193	0.277	0.166	0.226
Cell Cycle	-0.0913	0.0948	0.122	-0.159	0.254
DNA Repair	0.0347	-0.064	0.193	0.0119	0.164
Endolysosome	0.0955	0.293	0.253	0.0729	0.368
Epigenetic	0.0244	0.0996	0.224	-0.0921	0.324
Immune Response	0.0349	0.0726	0.156	0.0237	0.191
Lipid Metabolism	-0.155	0.0199	0.125	-0.124	0.178
Metal Binding and Homeostasis	-0.118	-0.127	-0.0518	-0.139	0.116
Mitochondrial Metabolism	0.305	0.252	0.273	0.273	0.322
Myelination					
Oxidative Stress	0.237	0.512	0.569	0.292	0.498
Proteostasis	0.0691	0.229	0.278	0.0353	0.328
RNA Spliceosome					
Structural Stabilization	-0.0402	0.0262	0.129	-0.067	0.186
Synapse	-0.0359	0.0699	0.197	-0.081	0.215
Tau Homeostasis					
Vasculature	-0.00868	0.115	0.106	0.00371	0.22
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Γight junction

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Apoptosis	0.0933	0.239	0.338	0.0777	0.233
APP Metabolism					
Autophagy	0.0823	0.263	0.279	-0.00765	0.237
Cell Cycle	0.117	0.175	0.237	0.192	0.09
DNA Repair					
Endolysosome	-0.0194	0.0907	0.116	-0.0116	0.184
Epigenetic	0.0641	0.202	0.36	0.00952	0.254
Immune Response	0.0828	0.223	0.233	0.0956	0.178
Lipid Metabolism	-0.0261	0.165	0.167	0.0102	0.135
Metal Binding and Homeostasis	0.0106	0.137	0.159	0.0475	0.0289
Mitochondrial Metabolism	0.0325	0.218	0.275	0.00418	0.0755
Myelination	-0.0214	0.16	0.232	0.0484	0.153
Oxidative Stress	-0.0286	0.441	0.361	-0.0136	0.208
Proteostasis	0.0129	0.136	0.199	-0.0073	0.0937
RNA Spliceosome					
Structural Stabilization	-0.014	0.0704	0.0739	0.0614	0.0353
Synapse	0.0339	0.131	0.2	0.0463	0.138
Tau Homeostasis					
Vasculature	0.013	0.2	0.124	0.119	0.177
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

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Apoptosis	0.207	0.175	0.207	0.217	0.282
APP Metabolism					
Autophagy					
Cell Cycle	0.28	0.234	0.314	0.391	0.229
DNA Repair					
Endolysosome	0.398	0.289	0.469	0.452	0.303
Epigenetic	0.158	0.0571	0.206	0.211	0.325
Immune Response	0.157	0.184	0.279	0.159	0.19
Lipid Metabolism	-0.0259	0.0818	0.234	0.043	0.127
Metal Binding and Homeostasis	0.207	0.249	0.295	0.239	0.161
Mitochondrial Metabolism	0.0412	0.159	0.204	0.0654	0.185
Myelination					
Oxidative Stress	0.351	0.291	0.401	0.466	0.457
Proteostasis	0.124	0.198	0.259	0.175	0.203
RNA Spliceosome					
Structural Stabilization	0.257	0.236	0.32	0.344	0.255
Synapse	0.0794	0.176	0.248	0.121	0.185
Tau Homeostasis					
Vasculature	0.147	0.191	0.381	0.178	0.267
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Signaling pathways regulating pluripotency of stem cells					
0.0602	0.297	0.202	0.148	0.343	
0.113	0.28	0.226	0.219	0.318	
-0.0101	0.207	0.313	-0.0464	0.146	
0.225	0.231	0.193	0.241	0.324	
0.0485	0.21	0.153	0.0671	0.245	
0.0959	0.25	0.179	0.0669	0.264	
0.0843	0.315	0.231	0.0935	0.35	
0.00482	0.237	0.188	-0.0508	0.231	
0.213	0.375	0.297	0.148	0.329	
0.3	0.47	0.163	0.416	0.497	
0.278	0.483	0.38	0.264	0.331	
0.209	0.305	0.246	0.231	0.341	
0.132	0.247	0.189	0.151	0.301	
0.189	0.331	0.242	0.145	0.405	
0.0183	0.267	0.191	0.0296	0.267	
WT/WT	WT/FC	FC/FC	WT/VS	VS/VS	
	0.0602  0.113  -0.0101  0.225  0.0485  0.0959  0.0843  0.00482  0.213  0.3  0.278  0.209  0.132  0.189	0.0602       0.297         0.113       0.28         -0.0101       0.207         0.225       0.231         0.0485       0.21         0.0959       0.25         0.0843       0.315         0.00482       0.237         0.213       0.375         0.3       0.47         0.278       0.483         0.209       0.305         0.132       0.247         0.189       0.331         0.0183       0.267	0.0602       0.297       0.202         0.113       0.28       0.226         -0.0101       0.207       0.313         0.225       0.231       0.193         0.0485       0.21       0.153         0.0959       0.25       0.179         0.0843       0.315       0.231         0.00482       0.237       0.188         0.213       0.375       0.297         0.3       0.47       0.163         0.278       0.483       0.38         0.209       0.305       0.246         0.132       0.247       0.189         0.189       0.331       0.242         0.0183       0.267       0.191	0.0602       0.297       0.202       0.148         0.113       0.28       0.226       0.219         -0.0101       0.207       0.313       -0.0464         0.225       0.231       0.193       0.241         0.0485       0.21       0.153       0.0671         0.0959       0.25       0.179       0.0669         0.0843       0.315       0.231       0.0935         0.00482       0.237       0.188       -0.0508         0.213       0.375       0.297       0.148         0.3       0.47       0.163       0.416         0.278       0.483       0.38       0.264         0.209       0.305       0.246       0.231         0.132       0.247       0.189       0.151         0.189       0.331       0.242       0.145         0.0183       0.267       0.191       0.0296	

#### Motor proteins

		IV	lotor protein	S	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle	0.146	0.0703	0.179	0.249	-0.00392
DNA Repair					
Endolysosome	0.0924	0.158	0.277	0.044	0.0858
Epigenetic					
Immune Response	0.108	-0.0694	0.0669	0.212	0.131
Lipid Metabolism	-0.124	-0.197	0.111	-0.0973	0.122
Metal Binding and Homeostasis	0.142	0.0455	-0.0324	0.31	0.134
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.129	0.14	0.285	0.0991	0.156
RNA Spliceosome					
Structural Stabilization	0.0233	-0.0726	0.0862	0.0575	0.0457
Synapse	0.0894	-0.0432	0.201	0.05	0.0796
Tau Homeostasis					
Vasculature	-0.0145	-0.236	0.0302	-0.0546	-0.0602
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### Cytoskeleton in muscle cells

		•			
Apoptosis	0.0322	0.262	0.274	0.0602	0.165
APP Metabolism					
Autophagy	0.0985	0.179	0.187	0.152	0.121
Cell Cycle	-0.0249	-0.00464	0.282	-0.0266	0.0391
DNA Repair					
Endolysosome	-0.0326	0.00227	0.116	0.0814	0.116
Epigenetic	0.392	0.305	0.164	0.333	0.313
Immune Response	-0.0249	0.0901	0.109	0.0503	0.12
Lipid Metabolism	-0.0561	-0.00997	0.0501	-0.0299	0.0559
Metal Binding and Homeostasis	0.0666	-2.69e-05	-0.00255	0.193	0.116
Mitochondrial Metabolism	0.218	0.186	0.273	0.206	0.188
Myelination					
Oxidative Stress					
Proteostasis	0.0761	0.0146	0.103	0.144	0.133
RNA Spliceosome					
Structural Stabilization	0.0364	-0.0148	0.0585	0.0972	0.127
Synapse	0.00848	0.0461	0.183	0.0478	0.169
Tau Homeostasis					
Vasculature	0.0391	-0.0146	0.131	0.0765	0.105
· ·	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

## Regulation of actin cytoskeleton

Apoptosis	0.108	0.251	0.267	0.0621	0.258
APP Metabolism					
Autophagy	0.176	0.222	0.295	0.163	0.278
Cell Cycle	0.0825	0.248	0.226	0.062	0.327
DNA Repair	0.0716	0.334	0.512	-0.0138	0.369
Endolysosome	0.129	0.233	0.255	0.0942	0.332
Epigenetic	0.17	0.281	0.249	0.14	0.401
Immune Response	0.0737	0.158	0.181	0.0489	0.244
Lipid Metabolism	0.0528	0.114	0.185	0.0447	0.22
Metal Binding and Homeostasis	0.0376	0.0362	0.0147	0.0876	0.144
Mitochondrial Metabolism	0.323	0.462	0.343	0.283	0.445
Myelination	0.264	0.26	0.364	0.21	0.32
Oxidative Stress	0.112	0.244	0.301	0.21	0.397
Proteostasis	0.222	0.289	0.305	0.246	0.366
RNA Spliceosome					
Structural Stabilization	0.0618	0.102	0.149	0.0449	0.214
Synapse	0.111	0.199	0.223	0.0719	0.275
Tau Homeostasis					
Vasculature	0.032	0.135	0.146	0.0253	0.161
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### **Apoptosis** -0.1310.105 0.0708 -0.0275APP Metabolism

Hematopoietic cell lineage

0.104

0.00564

-0.0433

0.0378

-0.0365

-0.0129

-0.0471

-0.00824

FC/FC

0.00693

0.066

-0.00185

-0.052

0.0514

0.0069

0.0234

0.0595

WT/VS

0.1

0.117

0.111

0.0533

0.0514

-4.71e-07

0.0692

0.0657

-0.0161

VS/VS

Autophagy

-0.0541

-0.0299

-0.0769

-0.145

-0.133

-0.0838

-0.0993

-0.178

WT/WT

0.0694

0.0408

-0.0284

0.0638

0.085

0.0662

-0.00626

0.0209

WT/FC

Cell Cycle

**DNA Repair** 

**Epigenetic** 

Myelination

**Proteostasis** 

Synapse

Vasculature

Oxidative Stress

**RNA Spliceosome** 

Tau Homeostasis

Structural Stabilization

Endolysosome

Immune Response

Metal Binding and Homeostasis

Mitochondrial Metabolism

Lipid Metabolism

	Complement and coagulation cascades				
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response	-0.00742	-0.0514	-0.00734	0.0167	0.104
Lipid Metabolism	-0.166	-0.168	-0.119	-0.118	0.125
Metal Binding and Homeostasis	-0.167	-0.186	0.0713	-0.0482	0.076
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	-0.0536	-0.0154	-0.146	0.0729	-0.00795
RNA Spliceosome					
Structural Stabilization	-0.0118	-0.0452	-0.0723	0.112	0.149
Synapse	0.132	0.0131	0.0187	0.237	0.26
Tau Homeostasis					
Vasculature	-0.0722	-0.0822	-0.131	0.0188	0.0407
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

PI	atelet activa	tion

Apoptosis	0.0665	0.236	0.194	0.12	0.29
APP Metabolism					
Autophagy	0.105	0.196	0.226	0.209	0.195
Cell Cycle	0.14	0.373	0.246	0.195	0.267
DNA Repair					
Endolysosome	0.0961	0.31	0.224	0.0785	0.317
Epigenetic	0.247	0.355	0.356	0.225	0.385
Immune Response	-0.00237	0.0906	0.0712	0.108	0.148
Lipid Metabolism	-0.00657	0.115	0.133	0.034	0.139
Metal Binding and Homeostasis	-0.0559	0.0896	0.132	0.0119	0.0451
Mitochondrial Metabolism	-0.0329	0.138	-0.0124	0.13	0.0417
Myelination					
Oxidative Stress	0.236	0.178	0.243	0.359	0.392
Proteostasis	0.00116	0.104	0.152	0.0964	0.11
RNA Spliceosome					
Structural Stabilization	-0.0265	0.112	0.102	0.0624	0.178
Synapse	0.034	0.193	0.221	0.0646	0.156
Tau Homeostasis					
Vasculature	-0.0426	0.0819	0.0942	0.0329	0.127
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### Neutrophil extracellular trap formation

Apoptosis	0.0922	0.0662	0.06	0.168	0.0708
APP Metabolism	-0.00117	0.00433	0.152	0.14	0.0985
Autophagy	0.154	0.0869	0.142	0.133	0.176
Cell Cycle	0.205	0.106	0.051	0.279	0.118
DNA Repair	0.283	0.157	0.273	0.315	0.122
Endolysosome	0.159	0.131	0.301	0.131	0.263
Epigenetic	0.237	0.184	0.122	0.261	0.218
Immune Response	0.112	0.0643	0.169	0.116	0.185
Lipid Metabolism	0.0635	0.0523	0.104	0.0796	0.138
Metal Binding and Homeostasis	0.0663	-0.0994	0.0239	0.0658	0.029
Mitochondrial Metabolism	0.136	0.0915	0.0389	0.184	0.0237
Myelination	0.502	0.49	0.395	0.74	0.397
Oxidative Stress	0.184	0.0968	0.168	0.181	0.23
Proteostasis	0.25	0.276	0.277	0.344	0.196
RNA Spliceosome					
Structural Stabilization	0.171	0.0982	0.214	0.207	0.221
Synapse	0.082	0.101	0.11	0.105	0.148
Tau Homeostasis					
Vasculature	0.112	0.114	0.289	0.093	0.203
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

### Toll-like receptor signaling pathway

				0.	
Apoptosis	-0.0229	0.124	0.0745	0.00439	0.124
APP Metabolism					
Autophagy	0.062	0.281	0.222	0.0724	0.207
Cell Cycle	0.167	0.389	0.266	0.126	0.166
DNA Repair	-0.145	0.00842	0.0392	-0.102	-0.0759
Endolysosome	0.0594	0.145	0.11	0.1	0.167
Epigenetic	-0.0135	0.193	0.123	0.0303	0.0682
Immune Response	-0.0053	0.108	0.0477	0.0197	0.0785
Lipid Metabolism	0.016	0.138	0.0615	0.0375	0.109
Metal Binding and Homeostasis	0.0328	0.23	0.14	0.0214	0.23
Mitochondrial Metabolism	0.00633	0.138	0.0769	0.0921	0.0541
Myelination					
Oxidative Stress	0.213	0.687	0.464	0.242	0.323
Proteostasis	0.144	0.327	0.254	0.183	0.3
RNA Spliceosome					
Structural Stabilization	-0.0197	0.207	0.0795	0.0456	0.164
Synapse	0.129	0.374	0.277	0.11	0.233
Tau Homeostasis					
Vasculature	0.0446	0.335	0.206	0.0185	0.0504
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

## NOD-like receptor signaling pathway

				• .	•
Apoptosis	-0.0308	0.0521	0.0017	-0.0209	0.00955
APP Metabolism					
Autophagy	0.0296	0.0735	0.0135	0.0216	0.0755
Cell Cycle	-0.0301	0.233	0.162	-0.128	0.171
DNA Repair	-0.0984	-0.0239	-0.0998	-0.0547	0.00906
Endolysosome	0.00799	0.0553	0.0369	0.0649	0.0815
Epigenetic	-0.105	-0.0272	-0.0556	-0.133	-0.0207
Immune Response	-0.026	-0.00172	0.000243	-0.0128	0.034
Lipid Metabolism	-0.0679	0.0619	-0.0151	-0.0269	-0.0575
Metal Binding and Homeostasis	-0.0767	0.0327	0.0422	-0.101	0.0645
Mitochondrial Metabolism	-0.0359	-0.0171	-0.0904	0.0471	-0.0468
Myelination					
Oxidative Stress	0.0254	0.192	0.135	0.0081	0.0762
Proteostasis	-0.0198	0.0578	0.0632	-0.0206	0.0609
RNA Spliceosome					
Structural Stabilization	-0.0348	0.0383	0.0121	0.0204	0.0326
Synapse	0.0188	0.158	0.0362	0.0828	0.0462
Tau Homeostasis					
Vasculature	-0.0316	0.243	0.189	-0.0435	0.00403
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

RIG-I-like receptor signaling pathway

0.0525

-0.0328

-0.109

-0.00918

-0.161

0.233

0.00419

-0.109

-0.275

FC/FC

-0.024

APP Metabolism

**Apoptosis** 

Autophagy

-0.136

-0.0936

-0.251

-0.094

-0.0899

-0.181

-0.0902

-0.179

-0.354

WT/VS

-0.162

-0.0293

-0.159

-0.0247

-0.00229

-0.0309

-0.219

VS/VS

Cell Cycle

**DNA Repair** Endolysosome

**Epigenetic** 

Immune Response

-0.257

-0.129

-0.171

-0.0606

-0.155

-0.219

-0.392

WT/WT

-0.0755

0.0173

-0.00699

0.148

0.0289

-0.0554

-0.0762

WT/FC

Lipid Metabolism
Metal Binding and Homeostasis
Mitochondrial Metabolism
Myelination
Oxidative Stress
Proteostasis
RNA Spliceosome
Structural Stabilization
Synapse
Tau Homeostasis
Vasculature

#### Cytosolic DNA-sensing pathway

Apoptosis	-0.0311	-0.0725	-0.16	0.0452	-0.0885
APP Metabolism					
Autophagy					
Cell Cycle	-0.0429	-0.0498	-0.136	0.0934	-0.207
DNA Repair	0.042	-0.0955	-0.21	0.205	-0.0347
Endolysosome					
Epigenetic	-0.113	-0.146	-0.188	-0.077	-0.175
Immune Response	-0.015	-0.0457	-0.0938	0.0545	-0.0617
Lipid Metabolism	-0.0339	-0.0452	-0.168	0.132	-0.145
Metal Binding and Homeostasis	-0.128	-0.0864	0.0269	-0.0589	-0.161
Mitochondrial Metabolism	-0.178	-0.321	-0.414	-0.0615	-0.262
Myelination					
Oxidative Stress					
Proteostasis	-0.0203	-0.0362	-0.117	0.0804	0.0428
RNA Spliceosome					
Structural Stabilization	-0.0597	-0.000674	-0.172	0.1	-0.0361
Synapse	0.174	0.235	0.102	0.355	0.0142
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### C-type lectin receptor signaling pathway

0.14

0.284

0.216

0.0579

0.265

0.0949

0.0867

0.12

0.321

0.0742

0.417

0.388

0.243

0.198

0.246

0.266

VS/VS

Apoptosis	0.0444	0.184	0.0722	0.117	
APP Metabolism					
Autophagy	0.18	0.257	0.211	0.0739	
Cell Cycle	0.177	0.242	0.19	0.122	
DNA Repair	0.0611	0.139	0.124	0.13	
Endolysosome	0.194	0.0941	0.0593	0.2	
Epigenetic	0.0834	0.207	0.161	0.0998	
Immune Response	0.0243	0.0728	0.0329	0.0887	
Lipid Metabolism	0.0203	0.051	-0.0221	0.0982	
Metal Binding and Homeostasis	0.17	0.258	0.214	0.0812	
Mitochondrial Metabolism	-0.0239	0.136	-0.00795	0.0303	
Myelination	0.429	0.569	0.389	0.419	
Oxidative Stress	0.271	0.465	0.348	0.247	
Proteostasis	0.167	0.211	0.14	0.253	
RNA Spliceosome					
Structural Stabilization	0.0666	0.142	0.0746	0.143	
Synapse	0.156	0.354	0.27	0.149	
Tau Homeostasis					
Vasculature	0.177	0.427	0.339	0.187	
	WT/WT	WT/FC	FC/FC	WT/VS	

#### Natural killer cell mediated cytotoxicity 0.112 -0.0466 0.0387

				-	-
Apoptosis	0.0324	0.0387	0.112	-0.0466	0.0594
APP Metabolism					
Autophagy	0.158	0.0936	0.157	0.107	0.109
Cell Cycle	0.0481	-0.00185	0.129	-0.0936	0.0393
DNA Repair	0.179	0.23	0.358	0.0991	0.0353
Endolysosome	0.209	0.0982	0.311	0.183	0.221
Epigenetic	0.126	0.277	0.339	0.0501	0.261
Immune Response	0.121	0.119	0.161	0.0641	0.14
Lipid Metabolism	0.00131	0.0248	0.101	-0.0146	0.0854
Metal Binding and Homeostasis	0.176	0.204	0.241	0.047	0.17
Mitochondrial Metabolism	0.224	0.256	0.22	0.163	0.184
Myelination					
Oxidative Stress	0.256	0.152	0.317	0.186	0.24
Proteostasis	0.29	0.295	0.38	0.253	0.196
RNA Spliceosome					
Structural Stabilization	0.126	0.114	0.141	0.0538	0.146
Synapse	0.126	0.181	0.256	0.0409	0.177
Tau Homeostasis					
Vasculature	0.0704	0.206	0.362	-0.0529	0.242
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

## Antigen processing and presentation

Apoptosis	-0.0348	0.136	-0.0493	0.0125	0.263
APP Metabolism					
Autophagy					
Cell Cycle	0.0413	0.192	0.1	0.0677	0.203
DNA Repair					
Endolysosome	-0.153	-0.0251	-0.0578	-0.0608	0.0954
Epigenetic	0.138	0.2	0.0358	0.173	0.322
Immune Response	-0.0799	-0.00368	0.00551	-0.0159	0.135
Lipid Metabolism	-0.119	-0.0277	-0.0838	-0.113	-0.0799
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	-0.0475	0.0285	-0.0542	-0.00471	0.0557
RNA Spliceosome					
Structural Stabilization	-0.177	-0.0951	-0.202	-0.143	0.062
Synapse	-0.057	0.215	0.0623	-0.1	0.252
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

T cell rece	ptor signalin	ng pathway	

			-		
Apoptosis	0.0566	0.307	0.176	0.0676	0.164
APP Metabolism					
Autophagy	0.0827	0.365	0.28	0.0172	0.221
Cell Cycle	0.133	0.351	0.193	0.215	0.202
DNA Repair	0.0597	0.325	0.257	0.0159	0.148
Endolysosome	0.143	0.225	0.232	0.144	0.195
Epigenetic	0.08	0.373	0.23	0.0919	0.145
Immune Response	0.0598	0.23	0.118	0.0664	0.0972
Lipid Metabolism	0.0608	0.25	0.165	0.122	0.116
Metal Binding and Homeostasis	0.117	0.291	0.198	0.0722	0.167
Mitochondrial Metabolism	0.124	0.374	0.263	0.0782	0.209
Myelination					
Oxidative Stress	0.259	0.575	0.511	0.328	0.282
Proteostasis	0.192	0.372	0.27	0.208	0.271
RNA Spliceosome					
Structural Stabilization	0.0925	0.279	0.175	0.106	0.202
Synapse	0.114	0.422	0.303	0.102	0.259
Tau Homeostasis					
Vasculature	0.0575	0.382	0.283	-0.00159	0.218
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Th1 and	Γh2 cell diffe	erentiation	
Apoptosis	0.0559	0.191	0.157	0.131	0.162
APP Metabolism					
Autophagy					
Cell Cycle	0.236	0.493	0.385	0.21	0.232
DNA Repair					
Endolysosome	0.0223	0.21	0.279	0.086	0.293
Epigenetic	0.0553	0.282	0.251	0.0684	0.155
Immune Response	0.0616	0.159	0.16	0.114	0.148

0.125

0.361

0.209

0.725

0.268

0.0802

0.312

0.262

WT/FC

0.119

0.31

0.225

0.54

0.401

0.127

0.311

0.281

FC/FC

0.15

0.0541

0.0177

0.175

0.147

0.188

0.127

0.0737

WT/VS

0.0901

0.23

0.105

0.361

0.216

0.206

0.21

0.155

VS/VS

0.0361

0.098

0.0608

0.161

0.196

0.0734

0.144

0.0734

WT/WT

Lipid Metabolism

Oxidative Stress

**RNA Spliceosome** 

Tau Homeostasis

Structural Stabilization

Myelination

**Proteostasis** 

Synapse

Vasculature

Metal Binding and Homeostasis

Mitochondrial Metabolism

Th17	cell	different	tiation

		Th17	cell different	tiation	
Apoptosis	0.00346	0.165	0.135	0.0622	0.13
APP Metabolism					
Autophagy	0.0457	0.254	0.377	0.154	0.147
Cell Cycle	0.261	0.458	0.413	0.276	0.317
DNA Repair					
Endolysosome	0.00114	0.228	0.339	0.0305	0.259
Epigenetic	0.0711	0.283	0.216	0.0445	0.123
Immune Response	0.0015	0.138	0.124	0.0366	0.0834
Lipid Metabolism	-0.034	0.0707	0.0722	0.0792	0.017
Metal Binding and Homeostasis	0.0412	0.214	0.221	-0.00117	0.147
Mitochondrial Metabolism	0.0891	0.261	0.286	0.0807	0.158
Myelination					
Oxidative Stress	0.129	0.696	0.535	0.159	0.349
Proteostasis	0.145	0.29	0.381	0.0738	0.153
RNA Spliceosome					
Structural Stabilization	0.0458	0.129	0.205	0.0563	0.169
Synapse	0.0807	0.268	0.284	0.0962	0.211
Tau Homeostasis					
Vasculature	-0.0482	0.157	0.178	-0.0481	0.0548
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### IL-17 signaling pathway

-0.0754  -0.0381  0.241  0.0244  -0.132  0.0608  -0.0267  -0.083	0.0685  0.285  0.349  0.268  0.0778  0.194  0.0326  0.0649	0.0376 0.245 0.254 0.247 0.144 0.164 -0.008	-0.0877  -0.135  0.248  0.0769  -0.175  0.0454  -0.0312	0.0273  0.214  0.189  0.0741  0.113  0.0507  0.0283
0.241 0.0244 -0.132 0.0608 -0.0267	0.349 0.268 0.0778 0.194 0.0326	0.254 0.247 0.144 0.164	0.248 0.0769 -0.175 0.0454	0.189 0.0741 0.113 0.0507
0.241 0.0244 -0.132 0.0608 -0.0267	0.349 0.268 0.0778 0.194 0.0326	0.254 0.247 0.144 0.164	0.248 0.0769 -0.175 0.0454	0.189 0.0741 0.113 0.0507
0.0244 -0.132 0.0608 -0.0267	0.268 0.0778 0.194 0.0326	0.247 0.144 0.164	0.0769 -0.175 0.0454	0.0741 0.113 0.0507
-0.132 0.0608 -0.0267	0.0778 0.194 0.0326	0.144 0.164	-0.175 0.0454	0.113
0.0608	0.194	0.164	0.0454	0.0507
-0.0267	0.0326			
		-0.008	-0.0312	0.0283
-0.083	0.0649			
		0.0607	-0.0881	-0.0183
-0.0538	0.123	0.138	-0.0299	0.0903
-0.00778	0.221	0.204	-0.045	0.191
0.255	0.552	0.539	0.305	0.315
0.0321	0.135	0.196	0.0117	0.12
-0.0282	0.0554	-0.0203	0.0229	0.00144
0.0477	0.235	0.209	0.0396	0.127
0.123	0.309	0.265	0.136	0.127
WT/WT	WT/FC	FC/FC	WT/VS	VS/VS
	-0.00778  0.255  0.0321  -0.0282  0.0477	-0.00778     0.221       0.255     0.552       0.0321     0.135       -0.0282     0.0554       0.0477     0.235       0.123     0.309	-0.00778       0.221       0.204         0.255       0.552       0.539         0.0321       0.135       0.196         -0.0282       0.0554       -0.0203         0.0477       0.235       0.209         0.123       0.309       0.265	-0.00778       0.221       0.204       -0.045         0.255       0.552       0.539       0.305         0.0321       0.135       0.196       0.0117         -0.0282       0.0554       -0.0203       0.0229         0.0477       0.235       0.209       0.0396         0.123       0.309       0.265       0.136

B cell rece	ptor signalir	ng pathway
2.242	0.004	0.000

				J 1	
Apoptosis	0.0805	0.219	0.081	0.0809	0.177
APP Metabolism					
Autophagy	0.185	0.283	0.286	0.173	0.351
Cell Cycle	0.31	0.324	0.213	0.217	0.383
DNA Repair					
Endolysosome	0.25	0.217	0.206	0.304	0.28
Epigenetic	0.134	0.294	0.174	0.13	0.194
Immune Response	0.138	0.205	0.105	0.158	0.19
Lipid Metabolism	0.0796	0.19	0.0725	0.161	0.17
Metal Binding and Homeostasis	0.198	0.425	0.289	0.153	0.358
Mitochondrial Metabolism	0.238	0.367	0.196	0.215	0.261
Myelination					
Oxidative Stress	0.431	0.589	0.499	0.505	0.494
Proteostasis	0.337	0.416	0.36	0.385	0.363
RNA Spliceosome					
Structural Stabilization	0.165	0.223	0.127	0.198	0.268
Synapse	0.234	0.379	0.322	0.182	0.434
Tau Homeostasis					
Vasculature	0.172	0.466	0.429	0.0517	0.336
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Fc epsilor	n RI signalin	g pathway	
0.0379	0.257	0.247	0.0175	

Apoptosis	0.0379	0.257	0.247	0.0175	0.212
APP Metabolism					
Autophagy	0.185	0.203	0.199	0.215	0.214
Cell Cycle	0.134	0.231	0.138	0.121	0.149
DNA Repair					
Endolysosome	0.235	0.151	0.23	0.234	0.131
Epigenetic	0.122	0.327	0.287	0.0843	0.245
Immune Response	0.0868	0.152	0.17	0.105	0.149
Lipid Metabolism	0.0296	0.115	0.16	0.0807	0.137
Metal Binding and Homeostasis	0.236	0.123	0.128	0.292	0.167
Mitochondrial Metabolism	0.0948	0.297	0.216	0.145	0.2
Myelination					
Oxidative Stress	0.276	0.44	0.419	0.254	0.378
Proteostasis	0.283	0.345	0.369	0.377	0.334
RNA Spliceosome					
Structural Stabilization	0.156	0.191	0.207	0.192	0.254
Synapse	0.172	0.356	0.271	0.128	0.293
Tau Homeostasis					
Vasculature	0.0323	0.241	0.292	-0.111	0.228
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

## Fc gamma R-mediated phagocytosis

Apoptosis	0.144	0.188	0.204	0.108	0.177
APP Metabolism					
Autophagy	0.24	0.225	0.257	0.234	0.286
Cell Cycle	0.223	0.26	0.242	0.203	0.288
DNA Repair	0.1	0.228	0.257	-0.00949	0.116
Endolysosome	0.187	0.215	0.261	0.133	0.24
Epigenetic	0.222	0.324	0.336	0.0746	0.292
Immune Response	0.156	0.191	0.235	0.136	0.224
Lipid Metabolism	0.109	0.15	0.219	0.094	0.185
letal Binding and Homeostasis	0.158	0.0702	0.0449	0.0783	0.089
Mitochondrial Metabolism	0.143	0.253	0.205	0.166	0.301
Myelination					
Oxidative Stress	0.322	0.292	0.235	0.313	0.505
Proteostasis	0.187	0.269	0.254	0.217	0.263
RNA Spliceosome					
Structural Stabilization	0.137	0.189	0.189	0.112	0.176
Synapse	0.148	0.177	0.21	0.0876	0.184
Tau Homeostasis					
Vasculature	0.122	0.219	0.282	0.0122	0.23
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### Leukocyte transendothelial migration 0.0332 0.115 -0.0808

Apoptosis	-0.0573	0.0332	0.115	-0.0808	0.0976
APP Metabolism					
Autophagy	0.0164	0.0456	0.0761	-0.0153	0.219
Cell Cycle	5.41e-06	0.235	0.166	-0.025	0.19
DNA Repair					
Endolysosome	-0.0708	0.222	0.218	-0.124	0.328
Epigenetic	0.0545	0.199	0.296	0.0295	0.222
Immune Response	0.0328	0.0555	0.117	0.0407	0.174
Lipid Metabolism	-0.119	0.0225	0.054	-0.123	0.125
Metal Binding and Homeostasis	0.0139	0.000256	0.0684	-0.0024	0.0812
Mitochondrial Metabolism	-0.0184	-0.0781	-0.0328	-0.00861	0.0206
Myelination					
Oxidative Stress	0.0643	0.00327	0.033	0.122	0.218
Proteostasis	0.16	0.232	0.336	0.116	0.271
RNA Spliceosome					
Structural Stabilization	-0.0431	0.0786	0.0719	-0.00853	0.11
Synapse	-0.0249	0.0496	0.11	-0.0364	0.172
Tau Homeostasis					
Vasculature	-0.0311	0.109	0.1	0.00465	0.119
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

# Intestinal immune network for IgA production

	111100	aniai iiiiiiaii	o mormoni ic	n ig/t produ	011011
Apoptosis	0.156	0.103	0.293	0.107	0.0946
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome	0.014	0.0612	0.136	-0.0989	0.0592
Epigenetic					
Immune Response	0.0326	0.00626	0.0811	0.0233	0.0462
Lipid Metabolism	0.0633	0.0593	0.177	-0.0318	-0.0458
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.0851	-0.0164	0.0116	0.0972	0.0329
RNA Spliceosome					
Structural Stabilization	-0.00475	0.0982	0.304	0.0827	0.0867
Synapse	0.0761	0.0221	0.147	-0.0219	0.0162
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Chemoki	ne signaling	pathway	

			5 5		
Apoptosis	0.0134	0.112	0.0984	0.0324	0.144
APP Metabolism					
Autophagy	0.126	0.183	0.147	0.123	0.188
Cell Cycle	0.0798	0.184	0.221	0.103	0.273
DNA Repair	0.206	0.267	0.368	0.146	0.264
Endolysosome	0.144	0.231	0.24	0.123	0.275
Epigenetic	0.0521	0.147	0.116	0.0864	0.0467
Immune Response	0.0491	0.0831	0.109	0.0179	0.12
Lipid Metabolism	0.0301	0.137	0.153	0.0248	0.187
Metal Binding and Homeostasis	0.0241	0.185	0.203	-0.0164	0.142
Mitochondrial Metabolism	0.129	0.144	0.15	0.12	0.138
Myelination	0.204	0.372	0.449	0.204	0.311
Oxidative Stress	0.235	0.323	0.218	0.278	0.346
Proteostasis	0.204	0.322	0.289	0.228	0.261
RNA Spliceosome					
Structural Stabilization	0.0597	0.173	0.171	0.0551	0.195
Synapse	0.0754	0.178	0.223	0.0762	0.167
Tau Homeostasis					
Vasculature	0.101	0.185	0.198	0.0577	0.222
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Ins	sulin	secreti	on

				•	
Apoptosis	0.0631	0.174	0.38	-0.0695	0.19
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome	0.292	0.304	0.473	0.216	0.383
Epigenetic	0.175	0.262	0.299	0.148	0.298
Immune Response	0.0586	0.277	0.309	-0.00267	0.149
Lipid Metabolism	-0.0323	0.307	0.214	-0.0394	0.00418
Metal Binding and Homeostasis	0.0174	0.166	0.3	-0.0601	0.0536
Mitochondrial Metabolism	0.0365	0.11	0.223	-0.027	-0.0107
Myelination					
Oxidative Stress					
Proteostasis	0.184	0.195	0.28	0.127	0.103
RNA Spliceosome					
Structural Stabilization	0.0649	0.19	0.308	0.0133	0.0946
Synapse	0.11	0.0843	0.228	0.0421	0.142
Tau Homeostasis					
Vasculature	0.118	0.095	0.29	0.0274	0.132
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

### Insulin signaling pathway

			5 51	,	
Apoptosis	0.0864	0.316	0.278	0.0455	0.236
APP Metabolism					
Autophagy	0.157	0.199	0.36	0.143	0.199
Cell Cycle	0.245	0.256	0.222	0.192	0.234
DNA Repair					
Endolysosome	0.277	0.284	0.437	0.254	0.379
Epigenetic	0.0877	0.395	0.358	0.0492	0.331
Immune Response	0.112	0.247	0.254	0.095	0.168
Lipid Metabolism	0.102	0.253	0.302	0.0879	0.216
Metal Binding and Homeostasis	0.188	0.304	0.214	0.0786	0.231
Mitochondrial Metabolism	0.116	0.242	0.249	0.0731	0.19
Myelination	0.281	0.373	0.408	0.154	0.423
Oxidative Stress	0.211	0.584	0.557	0.146	0.453
Proteostasis	0.267	0.381	0.346	0.27	0.342
RNA Spliceosome					
Structural Stabilization	0.151	0.304	0.337	0.103	0.268
Synapse	0.151	0.369	0.368	0.0527	0.298
Tau Homeostasis					
Vasculature	0.115	0.337	0.335	0.0768	0.252
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Glucago	n signaling	pathway	
Apoptosis	0.0925	0.31	0.291	0.131	0.29
APP Metabolism					
Autophagy					
Cell Cycle	0.208	0.509	0.459	0.161	0.429
DNA Repair					
Endolysosome					
Epigenetic	0.165	0.363	0.318	0.138	0.228
Immune Response	0.0475	0.256	0.299	0.0382	0.218
Lipid Metabolism	0.00461	0.175	0.141	0.0445	0.0762
Metal Binding and Homeostasis	0.0962	0.301	0.325	0.024	0.201
Mitochondrial Metabolism	0.0199	0.153	0.151	0.0521	0.0461
Myelination					
Oxidative Stress	0.0914	0.479	0.382	0.169	0.324
Proteostasis	0.0585	0.12	0.119	0.132	0.0757
RNA Spliceosome					
Structural Stabilization	0.185	0.329	0.287	0.202	0.305
Synapse	0.177	0.352	0.31	0.137	0.205
Tau Homeostasis					

Vasculature

0.154

WT/WT

0.275

FC/FC

0.209

WT/VS

0.257

VS/VS

0.38

WT/FC

### Population of linelysis in adinocytes

		Regulation of	of lipolysis ir	n adipocytes	i
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response	0.146	0.231	0.234	0.157	0.11
Lipid Metabolism	0.0453	0.156	0.195	0.112	0.0873
Metal Binding and Homeostasis	0.112	0.276	0.308	0.14	0.167
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.153	0.242	0.237	0.242	0.197
RNA Spliceosome					
Structural Stabilization	0.209	0.465	0.374	0.264	0.285
Synapse	0.123	0.209	0.218	0.215	0.15
Tau Homeostasis					
Vasculature	0.119	0.289	0.261	0.156	0.234
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Adipocytokine signaling pathway					
0.284	0.196	0.0996			

Apoptosis	0.0772	0.284	0.196	0.0996	0.174
APP Metabolism					
Autophagy	0.0302	0.452	0.43	-0.0341	0.291
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic	-0.0189	0.277	0.197	-0.00904	0.17
Immune Response	-0.0347	0.135	0.0462	0.0408	0.0313
Lipid Metabolism	-0.0124	0.115	0.0645	0.0698	0.0786
letal Binding and Homeostasis	0.0815	0.134	0.123	0.184	0.094
Mitochondrial Metabolism	0.00418	0.247	0.214	0.00505	0.168
Myelination					
Oxidative Stress	0.0218	0.604	0.442	0.00416	0.469
Proteostasis	0.154	0.274	0.227	0.185	0.246
RNA Spliceosome					
Structural Stabilization	-0.0929	0.0905	-0.00309	-0.047	0.12
Synapse	0.0613	0.206	0.182	0.102	0.196
Tau Homeostasis					
Vasculature	0.0683	0.167	0.137	0.192	0.135
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

# PPAR signaling pathway

		PPAR	signaling pa	ıınway	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response	0.163	0.109	0.144	0.417	0.252
Lipid Metabolism	0.0227	0.0708	0.0552	0.208	0.043
Metal Binding and Homeostasis	0.109	-0.0017	0.0865	0.246	0.119
Mitochondrial Metabolism	0.0547	0.173	0.147	0.243	0.213
Myelination					
Oxidative Stress					
Proteostasis	0.117	0.133	0.141	0.213	0.109
RNA Spliceosome					
Structural Stabilization					
Synapse	0.0122	-0.0625	-0.0297	0.265	0.0758
Tau Homeostasis					
Vasculature	0.0423	-0.0151	0.103	0.237	0.11
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

GnRH	secretion	on

		Gr	nkh secretio	on	
Apoptosis	0.0262	0.154	0.213	0.0165	0.167
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome	0.211	0.0666	0.292	0.268	0.29
Epigenetic	0.0933	0.13	0.297	0.0788	0.183
Immune Response	0.183	0.242	0.323	0.168	0.24
Lipid Metabolism	0.0364	0.205	0.26	0.011	0.162
Metal Binding and Homeostasis	0.237	0.0912	0.296	0.118	0.192
Mitochondrial Metabolism	0.112	0.31	0.28	0.0756	0.209
Myelination					
Oxidative Stress					
Proteostasis	0.109	0.174	0.186	0.133	0.182
RNA Spliceosome					
Structural Stabilization	0.249	0.248	0.377	0.205	0.331
Synapse	0.182	0.221	0.323	0.111	0.209
Tau Homeostasis					
Vasculature	0.208	0.41	0.534	0.0773	0.346
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

GnRH	signaling	pathway

		GnRH	signaling pa	athway	
Apoptosis	0.167	0.342	0.346	0.0804	0.27
APP Metabolism					
Autophagy					
Cell Cycle	0.122	0.251	0.329	0.00561	0.215
DNA Repair					
Endolysosome	0.343	0.29	0.358	0.37	0.34
Epigenetic	0.0905	0.29	0.382	0.0819	0.183
Immune Response	0.112	0.237	0.308	0.112	0.214
Lipid Metabolism	-0.0733	0.103	0.206	-0.0713	0.0703
Metal Binding and Homeostasis	0.105	0.173	0.261	0.0893	0.108
Mitochondrial Metabolism	0.0361	0.189	0.208	0.0376	0.164
Myelination					
Oxidative Stress	0.336	0.462	0.518	0.368	0.367
Proteostasis	0.124	0.212	0.294	0.226	0.22
RNA Spliceosome					
Structural Stabilization	0.212	0.181	0.315	0.234	0.262
Synapse	0.0918	0.199	0.287	0.0545	0.197
Tau Homeostasis					
Vasculature	0.193	0.238	0.339	0.136	0.235
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

### varian staraidaganasis

		Ovaria	ın steroidoge	enesis	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response	-0.0631	0.059	0.221	0.0517	0.102
Lipid Metabolism	-0.0079	0.0466	0.213	-0.0427	0.133
Metal Binding and Homeostasis	-0.0295	0.00839	0.106	0.0263	0.0548
Mitochondrial Metabolism	-0.0375	-0.0276	-0.0329	0.0483	0.117
Myelination					
Oxidative Stress					
Proteostasis	0.0593	0.188	0.348	0.121	0.22
RNA Spliceosome					
Structural Stabilization					
Synapse	-0.0589	-0.0116	0.209	-0.026	-0.0554
Tau Homeostasis					
Vasculature	-0.00129	-0.0856	0.295	0.136	0.183
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Estroge	n signaling բ	oathway
Apoptosis	0.11	0.21	0.221	0.221
APP Metabolism				
Autophagy	0.172	0.243	0.264	0.26
Cell Cycle	0.217	0.368	0.353	0.223
DNA Repair				
Endolysosome	0.102	0.178	0.215	0.158
Epigenetic	0.155	0.317	0.375	0.203
Immune Response	0.138	0.324	0.295	0.197
Lipid Metabolism	0.0397	0.273	0.284	0.0502
Metal Binding and Homeostasis	0.117	0.28	0.254	0.124
Mitochondrial Metabolism	0.126	0.269	0.205	0.149
Myelination	0.482	0.434	0.343	0.506
Oxidative Stress	0.388	0.47	0.475	0.503
Proteostasis	0.153	0.195	0.243	0.237
RNA Spliceosome				
Structural Stabilization	0.136	0.197	0.177	0.184
Synapse	0.0982	0.258	0.255	0.0953
Tau Homeostasis				
Vasculature	0.171	0.36	0.337	0.186
	WT/WT	WT/FC	FC/FC	WT/VS

0.291

0.308

0.399

0.263

0.34

0.241

0.219

0.233

0.292

0.577

0.51

0.245

0.252

0.21

0.319

VS/VS

#### Progesterone-mediated oocyte maturation 0.401

		0		,	
Apoptosis	0.162	0.454	0.274	0.128	0.401
APP Metabolism					
Autophagy					
Cell Cycle	0.0811	0.113	0.065	0.0992	0.0686
DNA Repair	-0.046	0.172	0.124	0.054	0.164
Endolysosome	0.328	0.607	0.672	0.234	0.54
Epigenetic	0.165	0.438	0.354	0.109	0.357
Immune Response	0.104	0.354	0.235	0.0727	0.236
Lipid Metabolism	0.127	0.454	0.374	0.0296	0.316
Metal Binding and Homeostasis	0.0604	0.247	0.164	0.0916	0.168
Mitochondrial Metabolism	0.128	0.431	0.297	0.0724	0.335
Myelination					
Oxidative Stress	0.33	0.661	0.498	0.307	0.57
Proteostasis	0.159	0.286	0.208	0.146	0.171
RNA Spliceosome					
Structural Stabilization	0.167	0.276	0.219	0.132	0.238
Synapse	0.132	0.396	0.341	0.0722	0.321
Tau Homeostasis					
Vasculature	0.186	0.376	0.394	0.164	0.348
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

### Prolactin signaling pathway

		i relacti	ii oigilaiiig p	Janimay	
Apoptosis	-0.00676	0.225	0.194	0.0325	0.132
APP Metabolism					
Autophagy	0.29	0.497	0.587	0.325	0.434
Cell Cycle	0.095	0.0557	0.18	0.275	0.138
DNA Repair					
Endolysosome	0.265	0.173	0.307	0.222	0.333
Epigenetic	0.0319	0.23	0.219	0.0419	0.0751
Immune Response	0.145	0.331	0.237	0.145	0.188
Lipid Metabolism	0.155	0.364	0.297	0.152	0.27
Metal Binding and Homeostasis	0.119	0.156	0.0863	0.222	0.0709
Mitochondrial Metabolism	0.193	0.344	0.309	0.175	0.263
Myelination					
Oxidative Stress	0.31	0.628	0.566	0.331	0.365
Proteostasis	0.284	0.437	0.401	0.36	0.388
RNA Spliceosome					
Structural Stabilization	0.223	0.311	0.264	0.265	0.326
Synapse	0.182	0.413	0.385	0.185	0.303
Tau Homeostasis					
Vasculature	0.154	0.486	0.418	0.0939	0.299
'	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Oxytocin signaling pathway						
Apoptosis	0.114	0.18	0.238	0.131	0.219		
APP Metabolism							
Autophagy	0.0962	0.328	0.408	0.00994	0.237		
Cell Cycle	0.154	0.287	0.333	0.129	0.319		
DNA Repair	0.13	-0.0814	0.252	0.21	0.171		
Endolysosome	0.348	0.337	0.382	0.264	0.357		
Epigenetic	0.164	0.297	0.392	0.154	0.29		
Immune Response	0.171	0.237	0.301	0.143	0.258		
Lipid Metabolism	-0.0324	0.194	0.219	-0.0403	0.172		
letal Binding and Homeostasis	0.0808	0.248	0.271	0.0276	0.191		
Mitochondrial Metabolism	-0.0308	0.0773	0.103	-0.0299	0.0809		

0.374

0.179

0.211

0.199

0.207

WT/FC

0.411

0.281

0.252

0.287

0.315

FC/FC

0.284

0.115

0.132

0.0956

0.0679

WT/VS

0.379

0.18

0.281

0.166

0.203

VS/VS

Myelination

**Proteostasis** 

Synapse

Vasculature

0.223

0.0752

0.149

0.137

0.11

WT/WT

Oxidative Stress

RNA Spliceosome

Tau Homeostasis

Structural Stabilization

# Relaxin signaling pathway

Apoptosis 0.159  APP Metabolism  Autophagy 0.405  Cell Cycle 0.242  DNA Repair  Endolysosome 0.195	0.284 0.458 0.433	0.241 0.512 0.42	0.264 0.413 0.271	0.314 0.4 0.365
Autophagy 0.405  Cell Cycle 0.242  DNA Repair	0.433			
Cell Cycle  DNA Repair	0.433			
DNA Repair		0.42	0.271	0.365
·	0.050			
Endolysosome 0.195	0.050			
	0.256	0.394	0.227	0.376
Epigenetic 0.202	0.34	0.373	0.248	0.291
Immune Response 0.122	0.234	0.247	0.176	0.201
Lipid Metabolism 0.0973	0.32	0.326	0.11	0.228
Metal Binding and Homeostasis 0.0524	0.192	0.213	0.131	0.159
Mitochondrial Metabolism 0.14	0.266	0.255	0.162	0.214
Myelination				
Oxidative Stress 0.343	0.47	0.511	0.474	0.435
Proteostasis 0.231	0.207	0.279	0.378	0.256
RNA Spliceosome				
Structural Stabilization 0.191	0.167	0.274	0.311	0.304
Synapse 0.16	0.257	0.239	0.222	0.237
Tau Homeostasis				
Vasculature 0.151	0.181	0.298	0.269	0.282
WT/W	T WT/FC	FC/FC	WT/VS	VS/VS

## Growth harmone synthesis, secretion and action

	Growth hormone synthesis, secretion and action						
Apoptosis	0.0133	0.166	0.198	-0.0147	0.0979		
APP Metabolism							
Autophagy	0.0779	0.233	0.338	0.0131	0.12		
Cell Cycle	0.132	0.298	0.334	0.119	0.213		
DNA Repair	-0.0659	0.0893	0.296	-0.2	-0.0788		
Endolysosome	0.285	0.445	0.505	0.232	0.374		
Epigenetic	0.0958	0.296	0.317	0.084	0.217		
Immune Response	0.0897	0.268	0.287	0.0462	0.117		
Lipid Metabolism	0.0457	0.223	0.244	0.0243	0.141		
Metal Binding and Homeostasis	0.075	0.176	0.269	0.0451	0.108		
Mitochondrial Metabolism	0.00866	0.202	0.214	0.0147	0.11		
Myelination							
Oxidative Stress	0.292	0.639	0.468	0.282	0.405		
Proteostasis	0.165	0.247	0.301	0.184	0.183		
RNA Spliceosome							
Structural Stabilization	0.129	0.246	0.284	0.0912	0.17		
Synapse	0.0911	0.157	0.231	0.0474	0.116		
Tau Homeostasis							
Vasculature	0.113	0.226	0.33	0.0369	0.147		
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS		

# Thyroid hormone synthesis

				,	
Apoptosis	-0.0647	0.0575	0.154	-0.0187	0.155
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic	0.148	0.194	0.283	0.108	0.269
Immune Response	-0.00227	0.23	0.248	-0.0402	0.073
Lipid Metabolism	-0.0643	0.169	0.142	-0.00384	0.00504
Metal Binding and Homeostasis	-0.00312	0.191	0.27	-0.0572	0.0798
Mitochondrial Metabolism	-0.079	0.132	0.0608	-0.0492	0.0992
Myelination					
Oxidative Stress	0.195	0.158	0.045	0.317	0.202
Proteostasis	-0.0435	0.0712	0.126	0.0701	0.0121
RNA Spliceosome					
Structural Stabilization	-0.106	0.0589	0.122	-0.0486	0.0363
Synapse	-0.0789	0.085	0.0812	-0.011	-0.0401
Tau Homeostasis					
Vasculature	0.187	0.346	0.423	0.245	0.223
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

# Thyroid hormone signaling pathway

Apoptosis	-0.000842	0.0678	0.154	0.0382	0.134
APP Metabolism					
Autophagy	0.18	0.303	0.357	0.159	0.229
Cell Cycle	0.0544	0.0398	0.104	0.129	0.129
DNA Repair	0.0731	0.0341	0.201	0.0995	0.136
Endolysosome	0.212	0.122	0.187	0.321	0.292
Epigenetic	0.0138	0.0283	0.137	0.0688	0.0585
Immune Response	0.131	0.184	0.281	0.111	0.174
Lipid Metabolism	0.0508	0.163	0.184	0.125	0.189
Metal Binding and Homeostasis	0.0711	0.133	0.245	0.151	0.105
Mitochondrial Metabolism	0.151	0.231	0.312	0.142	0.24
Myelination	0.313	0.31	0.206	0.503	0.272
Oxidative Stress	0.0357	0.245	0.174	0.0562	0.168
Proteostasis	0.0696	0.12	0.17	0.156	0.149
RNA Spliceosome					
Structural Stabilization	0.108	0.184	0.207	0.17	0.203
Synapse	0.128	0.194	0.225	0.148	0.185
Tau Homeostasis					
Vasculature	0.0539	0.198	0.287	0.112	0.187
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Parathyroid hormone synthesis, secretion and action						
Apoptosis	0.114	0.232	0.296	0.155	0.305		
APP Metabolism							
Autophagy							
Cell Cycle	0.0889	0.318	0.373	0.128	0.355		
DNA Repair							
Endolysosome	0.0893	0.214	0.302	0.176	0.299		
Epigenetic	0.181	0.272	0.385	0.212	0.344		
Immune Response	0.0592	0.184	0.343	0.0928	0.251		
Lipid Metabolism	-0.0026	0.167	0.279	0.0414	0.159		
Metal Binding and Homeostasis	0.0967	0.209	0.278	0.101	0.213		
Mitochondrial Metabolism	0.00342	0.158	0.187	0.0163	0.114		
Myelination							
Oxidative Stress	0.184	0.33	0.348	0.347	0.436		
Proteostasis	0.0979	0.132	0.209	0.169	0.193		
RNA Spliceosome							
Structural Stabilization	0.0446	0.181	0.338	0.0409	0.269		
0							

Epigenetic	0.181	0.272	0.385	0.212	0.344
Immune Response	0.0592	0.184	0.343	0.0928	0.251
Lipid Metabolism	-0.0026	0.167	0.279	0.0414	0.159
Metal Binding and Homeostasis	0.0967	0.209	0.278	0.101	0.213
Mitochondrial Metabolism	0.00342	0.158	0.187	0.0163	0.114
Myelination					
Oxidative Stress	0.184	0.33	0.348	0.347	0.436
Proteostasis	0.0979	0.132	0.209	0.169	0.193
RNA Spliceosome					
Structural Stabilization	0.0446	0.181	0.338	0.0409	0.269
Synapse	0.0391	0.161	0.206	0.11	0.141
Tau Homeostasis					
Vasculature	0.108	0.219	0.342	0.158	0.307

WT/WT WT/FC FC/FC WT/VS VS/VS

	Melanogenesis						
Apoptosis	0.111	0.254	0.258	0.132	0.312		
APP Metabolism							
Autophagy							
Cell Cycle	0.152	0.283	0.414	0.0578	0.34		
DNA Repair							
Endolysosome	0.326	0.282	0.265	0.269	0.341		
Epigenetic	0.00396	0.0706	0.0969	0.0416	0.145		
Immune Response	0.0948	0.196	0.183	0.0413	0.195		
Lipid Metabolism	0.0899	0.264	0.28	0.0823	0.18		
Metal Binding and Homeostasis	0.0618	0.206	0.297	-0.00683	0.139		
Mitochondrial Metabolism	0.15	0.291	0.338	0.0767	0.237		
Myelination							
Oxidative Stress							
Proteostasis	0.181	0.207	0.215	0.168	0.265		
RNA Spliceosome							
Structural Stabilization	0.173	0.266	0.227	0.131	0.238		
Synapse	0.17	0.263	0.249	0.13	0.234		
Tau Homeostasis							
Vasculature	0.175	0.288	0.309	0.215	0.314		
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS		

	Renin secretion						
Apoptosis	0.0334	0.143	0.0637	0.231	0.0896		
APP Metabolism							
Autophagy							
Cell Cycle	0.239	0.483	0.42	0.164	0.402		
DNA Repair							
Endolysosome							
Epigenetic							
Immune Response	0.0457	0.229	0.321	0.128	0.335		
Lipid Metabolism	-0.0704	0.143	0.0666	0.0975	0.045		

Endolysosome					
Epigenetic					
Immune Response	0.0457	0.229	0.321	0.128	0.335
Lipid Metabolism	-0.0704	0.143	0.0666	0.0975	0.045
Metal Binding and Homeostasis	0.0813	0.331	0.355	0.0324	0.238

Epigenetio					
Immune Response	0.0457	0.229	0.321	0.128	0.335
Lipid Metabolism	-0.0704	0.143	0.0666	0.0975	0.045
letal Binding and Homeostasis	0.0813	0.331	0.355	0.0324	0.238
Mitochondrial Metabolism	-0.0734	0.111	0.113	0.0127	-0.0231
Myelination					
Oxidative Stress					
Proteostasis	-0.0472	0.188	0.0373	0.119	-0.0863

Immune Response	0.0457	0.229	0.321	0.128	0.335
Lipid Metabolism	-0.0704	0.143	0.0666	0.0975	0.045
Metal Binding and Homeostasis	0.0813	0.331	0.355	0.0324	0.238
Mitochondrial Metabolism	-0.0734	0.111	0.113	0.0127	-0.0231
Myelination					
Oxidative Stress					
Proteostasis	-0.0472	0.188	0.0373	0.119	-0.0863
RNA Spliceosome					
Structural Stabilization	0.14	0.31	0.258	0.231	0.298
Synapse	0.0737	0.232	0.29	0.114	0.188
Tau Homeostasis					
Vasculature	0.142	0.289	0.288	0.185	0.22

Myelination					
Oxidative Stress					
Proteostasis	-0.0472	0.188	0.0373	0.119	-0.0863
RNA Spliceosome					
Structural Stabilization	0.14	0.31	0.258	0.231	0.298
Synapse	0.0737	0.232	0.29	0.114	0.188
Tau Homeostasis					
Vasculature	0.142	0.289	0.288	0.185	0.22
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Proteostasis	-0.0472	0.188	0.0373	0.119	-0.0863
RNA Spliceosome					
Structural Stabilization	0.14	0.31	0.258	0.231	0.298
Synapse	0.0737	0.232	0.29	0.114	0.188
Tau Homeostasis					
Vasculature	0.142	0.289	0.288	0.185	0.22
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Renin-angiotensin system				
		Kenin-a	angiotensin	system	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response	-0.165	0.0276	0.0594	0.0488	0.174
Lipid Metabolism					
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	-0.0388	0.227	0.0367	0.134	0.0732
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature	-0.111	0.201	0.00748	0.173	0.14
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS
		,, ,	- · · · <del>-</del>	, . <b>.</b>	-: - <del>-</del>

## Aldosterone synthesis and secretion

			-		
Apoptosis	0.0712	0.197	0.356	0.0444	0.163
APP Metabolism					
Autophagy					
Cell Cycle	0.0776	0.271	0.467	-0.0439	0.242
DNA Repair					
Endolysosome	0.296	0.328	0.592	0.263	0.259
Epigenetic	0.107	0.265	0.343	0.15	0.194
Immune Response	-0.0232	0.206	0.341	-0.0895	0.0859
Lipid Metabolism	-0.0182	0.189	0.285	-0.0365	0.062
Metal Binding and Homeostasis	0.074	0.219	0.359	-0.0382	0.114
Mitochondrial Metabolism	-0.08	0.155	0.218	-0.112	0.0533
Myelination					
Oxidative Stress					
Proteostasis	0.108	0.202	0.337	0.147	0.0446
RNA Spliceosome					
Structural Stabilization	0.144	0.207	0.373	0.101	0.182
Synapse	0.125	0.247	0.363	0.095	0.0969
Tau Homeostasis					
Vasculature	0.146	0.252	0.446	0.124	0.171
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### Cortisol synthesis and secretion

		00111301 3		3001011011	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic	0.158	0.289	0.424	0.293	0.296
Immune Response	0.0141	0.178	0.383	0.0734	0.0958
Lipid Metabolism	0.0312	0.219	0.357	0.0584	0.138
Metal Binding and Homeostasis	0.0758	0.166	0.303	0.0503	0.1
Mitochondrial Metabolism	-0.103	0.117	0.0788	-0.0469	-0.0838
Myelination					
Oxidative Stress					
Proteostasis	0.0738	0.175	0.242	0.222	0.0458
RNA Spliceosome					
Structural Stabilization	0.145	0.0893	0.24	0.3	0.165
Synapse	0.086	0.159	0.314	0.134	0.084
Tau Homeostasis					
Vasculature	0.266	0.225	0.51	0.321	0.264
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Cardiac	muscle con	traction	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism	0.221	0.418	0.293	0.224	0.114
Metal Binding and Homeostasis	-0.108	-0.0232	-0.0987	-0.0859	-0.157
Mitochondrial Metabolism	-0.244	-0.412	-0.576	-0.119	-0.485
Myelination					
Oxidative Stress					
Proteostasis	0.12	0.285	0.374	0.137	-0.00253
RNA Spliceosome					
Structural Stabilization	-0.0121	0.00324	0.0724	0.0171	-0.00821
Synapse	0.16	0.25	0.371	0.122	0.175
Tau Homeostasis					
Vasculature	0.0385	0.136	0.28	-0.0206	0.0485
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

# Adrenergic signaling in cardiomyocytes

		•		, ,	
Apoptosis	0.205	0.367	0.388	0.278	0.39
APP Metabolism					
Autophagy					
Cell Cycle	0.203	0.475	0.41	0.212	0.357
DNA Repair					
Endolysosome	0.377	0.43	0.39	0.274	0.492
Epigenetic	0.228	0.332	0.34	0.226	0.385
Immune Response	0.0957	0.286	0.239	0.0693	0.272
Lipid Metabolism	0.105	0.304	0.288	0.0476	0.219
Metal Binding and Homeostasis	0.00683	0.242	0.252	-0.0293	0.123
Mitochondrial Metabolism	0.0675	0.28	0.271	0.0669	0.192
Myelination					
Oxidative Stress	0.099	0.239	0.263	0.19	0.255
Proteostasis	0.18	0.254	0.296	0.231	0.237
RNA Spliceosome					
Structural Stabilization	0.195	0.269	0.259	0.207	0.264
Synapse	0.157	0.262	0.336	0.135	0.207
Tau Homeostasis					
Vasculature	0.13	0.23	0.305	0.0608	0.226
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

## Vascular smooth muscle contraction

Apoptosis	-0.0102	0.0493	0.0348	-0.0547	0.0424
APP Metabolism					
Autophagy	0.0339	0.0264	0.194	-0.0843	0.0899
Cell Cycle	0.0419	0.257	0.286	-0.0664	0.193
DNA Repair					
Endolysosome	0.208	0.138	0.115	0.203	0.152
Epigenetic					
Immune Response	0.0313	0.0866	0.142	-0.023	0.107
Lipid Metabolism	0.0136	0.0909	0.124	0.0249	0.107
Metal Binding and Homeostasis	0.052	0.144	0.182	-0.0245	0.13
Mitochondrial Metabolism	0.0686	0.173	0.128	0.127	0.131
Myelination					
Oxidative Stress					
Proteostasis	0.143	0.197	0.19	0.169	0.145
RNA Spliceosome					
Structural Stabilization	-0.0355	0.0356	0.0846	-0.0447	0.103
Synapse	0.076	0.0842	0.163	0.0309	0.0725
Tau Homeostasis					
Vasculature	0.0678	0.069	0.212	0.062	0.157
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Salivary secretion				
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response	-0.0412	0.275	0.175	-0.103	0.0347
Lipid Metabolism	-0.0251	0.224	0.228	-0.0296	0.00759
Metal Binding and Homeostasis	-0.0245	0.155	0.273	-0.145	-0.0198
Mitochondrial Metabolism	-0.0768	0.0131	0.173	-0.087	-0.0144
Myelination					
Oxidative Stress					
Proteostasis	0.00456	0.133	0.181	-0.0881	-0.0267
RNA Spliceosome					
Structural Stabilization	0.023	0.122	0.258	-0.0265	0.0927
Synapse	-0.0228	0.126	0.234	-0.113	0.04
Tau Homeostasis					
Vasculature	0.106	0.363	0.491	-0.017	0.203
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### Castria acid socration

		Gast	ric acid secr	etion	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle	0.215	0.369	0.497	0.0472	0.375
DNA Repair					
Endolysosome	0.114	0.268	0.34	0.0952	0.36
Epigenetic					
Immune Response	0.0592	0.233	0.266	-0.055	0.131
Lipid Metabolism	-0.027	0.209	0.214	-0.00914	0.114
Metal Binding and Homeostasis	0.0911	0.258	0.291	0.055	0.157
Mitochondrial Metabolism	-0.0564	0.0514	0.189	-0.108	0.0574
Myelination					
Oxidative Stress					
Proteostasis	0.0799	0.232	0.333	0.0091	0.0359
RNA Spliceosome					
Structural Stabilization	0.197	0.258	0.326	0.114	0.252
Synapse	0.0837	0.171	0.225	0.0645	0.161
Tau Homeostasis					
Vasculature	0.189	0.291	0.368	0.111	0.218
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Pan	creatic secre	etion
Apoptosis	-0.0723	0.0827	0.185	-0.203

0.0951

APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome	-0.0423	0.169	-0.0369	-0.132	0.095
Epigenetic					
Immune Response	-0.0267	0.258	0.0814	-0.173	0.0834
Lipid Metabolism	-0.0594	0.155	0.108	-0.135	0.027
Metal Binding and Homeostasis	-0.0632	0.105	0.148	-0.124	0.00877
Mitochondrial Metabolism	-0.109	0.148	0.16	-0.148	0.0284
Myelination					
Oxidative Stress					
Proteostasis	0.00896	0.194	0.185	-0.121	0.0393
RNA Spliceosome					
Structural Stabilization	0.0134	0.211	0.182	-0.0814	0.163
Synapse	-0.0438	0.129	0.148	-0.116	0.0841
Tau Homeostasis					
Vasculature	-0.0169	0.316	0.328	-0.119	0.12
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Е	Bile secretion	n	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response	0.00912	0.279	0.202	0.0839	-0.0169
Lipid Metabolism	0.0328	0.186	0.141	0.0962	0.0785
letal Binding and Homeostasis	0.0414	0.179	0.188	0.138	0.0411
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.0763	0.19	0.279	0.0842	-0.0206
RNA Spliceosome					
Structural Stabilization	0.0923	0.0502	0.187	0.235	0.119
Synapse	0.0587	0.0559	0.159	0.114	0.0516
Tau Homeostasis					
Vasculature	-0.00397	0.117	0.19	0.155	0.0873
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

## Carbohydrate digestion and absorption

	Carbohydrate digestion and absorption					
Apoptosis						
APP Metabolism						
Autophagy						
Cell Cycle						
DNA Repair						
Endolysosome						
Epigenetic						
Immune Response	0.132	0.394	0.271	0.108	0.174	
Lipid Metabolism	0.165	0.387	0.233	0.13	0.152	
Metal Binding and Homeostasis	0.0297	0.205	0.288	-0.0159	0.117	
Mitochondrial Metabolism	0.0807	0.2	0.13	0.0952	0.0965	
Myelination						
Oxidative Stress						
Proteostasis	0.405	0.566	0.416	0.496	0.264	
RNA Spliceosome						
Structural Stabilization	0.167	0.46	0.194	0.227	0.299	
Synapse	0.125	0.297	0.245	0.121	0.149	
Tau Homeostasis						
Vasculature	0.0246	0.309	0.172	-0.0157	0.0954	
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS	

# Protein digestion and absorption

Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome	-0.0262	0.142	0.0636	-0.0362	0.0717
Epigenetic					
Immune Response	0.0109	0.248	0.193	0.108	0.123
Lipid Metabolism	0.102	0.34	0.123	0.0311	0.0293
Metal Binding and Homeostasis	0.221	0.185	0.201	0.313	0.15
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.223	0.0417	0.126	0.297	0.201
RNA Spliceosome					
Structural Stabilization	0.244	0.0385	0.151	0.319	0.219
Synapse	0.124	0.274	0.212	0.183	0.137
Tau Homeostasis					
Vasculature	0.125	0.134	0.277	0.188	0.175
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Fat digestion and absorption					
Apoptosis		i at aigo		001Pil011		
APP Metabolism						
Autophagy						
Cell Cycle						
DNA Repair						
Endolysosome						
Epigenetic						
Immune Response	0.18	0.111	0.202	0.185	0.412	
Lipid Metabolism	0.227	0.076	0.227	0.11	0.212	
Metal Binding and Homeostasis	0.0868	-0.0843	-0.0606	-0.15	0.0594	
Mitochondrial Metabolism						
Myelination						
Oxidative Stress						
Proteostasis	0.327	0.137	0.327	0.259	0.334	
RNA Spliceosome	0.521	0.137	0.321	0.233	0.354	
Structural Stabilization						
Synapse						
Tau Homeostasis						
Vasculature						
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS	

### Cholesterol metabolism

Apoptosis	-0.063	0.0975	0.0918	0.0194	0.0487
APP Metabolism	-0.0836	0.0149	0.319	0.0208	0.176
Autophagy	-0.0321	0.128	0.292	0.0697	0.133
Cell Cycle					
DNA Repair					
Endolysosome	-0.0685	-0.0244	0.134	0.124	0.0942
Epigenetic					
Immune Response	-0.0289	0.0914	0.243	0.133	0.215
Lipid Metabolism	-0.0268	0.058	0.0842	0.162	0.0681
Metal Binding and Homeostasis	0.0147	0.1	0.109	0.259	0.267
Mitochondrial Metabolism	-0.214	-0.153	-0.42	0.0932	-0.233
Myelination					
Oxidative Stress					
Proteostasis	-0.0152	0.0955	0.189	0.151	0.158
RNA Spliceosome					
Structural Stabilization	0.0115	0.109	0.172	0.197	0.11
Synapse	-0.0409	0.105	0.137	0.131	0.0433
Tau Homeostasis					
Vasculature	-0.0894	-0.0083	0.256	0.0797	0.0753
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS
	WT/WT	WT/FC	FC/FC	WT/VS	VS/\

	Vitamin digestion and absorption					
Apoptosis						
APP Metabolism						
Autophagy						
Cell Cycle						
DNA Repair						
Endolysosome						
Epigenetic						
Immune Response						
Lipid Metabolism	0.0924	-0.131	0.0635	0.213	0.00896	
Metal Binding and Homeostasis						
Mitochondrial Metabolism						
Myelination						
Oxidative Stress						
Proteostasis						
RNA Spliceosome						
Structural Stabilization						
Synapse						
Tau Homeostasis						
Vasculature						
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS	

## Mineral absorption

Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome	-0.149	-0.0661	-0.223	0.0332	-0.122
Epigenetic					
Immune Response	-0.0845	0.174	0.131	0.0251	0.0571
Lipid Metabolism	-0.0243	0.2	0.203	0.0278	0.066
letal Binding and Homeostasis	-0.0405	0.0556	0.155	-0.0662	0.0526
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	-0.0277	0.239	0.218	0.0519	-0.0439
RNA Spliceosome					
Structural Stabilization	-0.0792	0.273	0.243	-0.157	0.072
Synapse	-0.0372	0.119	0.263	-0.0677	0.064
Tau Homeostasis					
Vasculature	-0.076	0.282	0.29	-0.137	-0.0245
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

# Vasopressin-regulated water reabsorption

	vas	obiessiii–ie	gulaleu wal	er reabsorp	lion
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle	0.054	0.252	0.351	0.087	-0.151
DNA Repair					
Endolysosome	0.292	0.41	0.486	0.231	0.247
Epigenetic					
Immune Response	0.196	0.353	0.345	0.313	0.242
Lipid Metabolism					
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.0489	0.0256	0.247	0.0571	0.0455
RNA Spliceosome					
Structural Stabilization	0.0378	0.0573	0.134	0.109	-0.0606
Synapse	0.137	0.147	0.283	0.147	0.0935
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

# Aldosterone-regulated sodium reabsorption

	,		galatoa ooal		01.011
Apoptosis	0.0371	0.357	0.445	-0.19	0.282
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic	0.126	0.368	0.482	0.025	0.324
Immune Response	0.0855	0.322	0.393	-0.0421	0.177
Lipid Metabolism	0.0868	0.252	0.277	-0.0458	0.108
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.257	0.333	0.517	-0.0261	0.225
RNA Spliceosome					
Structural Stabilization	0.136	0.477	0.424	0.0632	0.306
Synapse	0.114	0.145	0.238	-0.0634	0.0735
Tau Homeostasis					
Vasculature	-0.0278	0.272	0.328	-0.184	0.0937
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

0.192
0.0669
0.0266
0.00993
0.0648
0.124
0.0683
-0.0103

	Proximal tubule bicarbonate reclamation					
Apoptosis						
APP Metabolism						
Autophagy						
Cell Cycle						
DNA Repair						
Endolysosome						
Epigenetic						
Immune Response						
Lipid Metabolism	0.0843	0.377	0.0839	0.33	0.0207	
Metal Binding and Homeostasis	0.0805	0.296	0.0578	0.34	0.0151	
Mitochondrial Metabolism						
Myelination						
Oxidative Stress						
Proteostasis						
RNA Spliceosome						
Structural Stabilization						
Synapse						
Tau Homeostasis						
Vasculature						
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS	

### **Apoptosis APP Metabolism**

Collecting duct acid secretion

Autophagy	0.149	0.232	0.242	0.151	0.0427
Cell Cycle					
DNA Repair					
Endolysosome	0.127	0.172	0.189	0.13	-0.0109

Cell Cycle					
DNA Repair					
Endolysosome	0.127	0.172	0.189	0.13	-0.0109
Epigenetic					
Immune Response					

0.127	0.172	0.189	0.13	-0.0109
0.127	0.172	0.189	0.13	-0.0109

Lipid Metabolism					
letal Binding and Homeostasis					
Mitochondrial Metabolism	0.127	0.172	0.189	0.13	-0.0109
Myelination					
Oxidative Stress					
Proteostasis					

0.183

WT/FC

0.177

FC/FC

0.0501

WT/VS

-0.0296

VS/VS

RNA Spliceosome

Tau Homeostasis

Synapse

Vasculature

0.159

WT/WT

Structural Stabilization

### Glutamatergic synapse

		Giula	matergic syr	iapse	
Apoptosis	0.0411	0.227	0.316	-0.11	0.104
APP Metabolism					
Autophagy					
Cell Cycle	0.269	0.53	0.669	0.064	0.416
DNA Repair					
Endolysosome	0.264	0.421	0.564	0.0668	0.415
Epigenetic					
Immune Response	0.0901	0.206	0.433	-0.081	0.227
Lipid Metabolism	-0.0181	0.16	0.298	-0.0642	0.151
Metal Binding and Homeostasis	0.0188	0.194	0.306	-0.0599	0.123
Mitochondrial Metabolism	-0.108	0.119	0.114	-0.0437	0.0278
Myelination					
Oxidative Stress					
Proteostasis	0.0192	0.0893	0.305	-0.0604	0.107
RNA Spliceosome					
Structural Stabilization	0.174	0.161	0.416	0.0385	0.341
Synapse	0.084	0.181	0.311	-0.0239	0.188
Tau Homeostasis					
Vasculature	0.0684	0.269	0.402	-0.0171	0.272
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### CABA argia aynanga

		GAE	BAergic syna	apse	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome	0.193	0.338	0.53	0.175	0.392
Epigenetic					
Immune Response					
Lipid Metabolism	-0.0391	0.13	0.322	-0.0109	0.114
Metal Binding and Homeostasis	0.0594	0.174	0.421	-0.035	0.13
Mitochondrial Metabolism	0.00609	-0.0306	0.103	0.0883	0.0761
Myelination					
Oxidative Stress					
Proteostasis	0.141	0.16	0.369	0.114	0.0995
RNA Spliceosome					
Structural Stabilization	0.288	0.248	0.485	0.228	0.251
Synapse	0.058	0.21	0.326	0.0214	0.16
Tau Homeostasis					
Vasculature	0.0623	0.0361	0.329	0.126	0.219
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### Cholinergic synapse

			•	•	
Apoptosis	0.0873	0.238	0.274	0.101	0.302
APP Metabolism					
Autophagy	0.207	0.294	0.337	0.255	0.16
Cell Cycle	0.163	0.3	0.37	0.164	0.392
DNA Repair					
Endolysosome	0.288	0.486	0.548	0.175	0.44
Epigenetic	0.138	0.261	0.269	0.165	0.306
Immune Response	0.12	0.28	0.34	0.0417	0.217
Lipid Metabolism	0.0621	0.283	0.299	-0.0151	0.155
Metal Binding and Homeostasis	0.0837	0.231	0.349	0.0397	0.19
Mitochondrial Metabolism	0.0627	0.257	0.297	0.0674	0.222
Myelination					
Oxidative Stress	0.483	0.613	0.546	0.615	0.543
Proteostasis	0.193	0.327	0.345	0.239	0.231
RNA Spliceosome					
Structural Stabilization	0.239	0.313	0.364	0.206	0.324
Synapse	0.117	0.219	0.298	0.0753	0.148
Tau Homeostasis					
Vasculature	0.133	0.323	0.388	0.024	0.256
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### Dopaminergic synapse

		•	5 ,	•	
Apoptosis	0.112	0.355	0.372	0.132	0.287
APP Metabolism	0.0161	0.174	0.497	-0.279	0.203
Autophagy	0.119	0.354	0.336	0.0621	0.299
Cell Cycle	0.124	0.395	0.336	0.144	0.286
DNA Repair					
Endolysosome	0.147	0.215	0.426	0.0713	0.36
Epigenetic	0.168	0.401	0.441	0.187	0.38
Immune Response	0.00928	0.264	0.306	-0.00427	0.191
Lipid Metabolism	0.0684	0.373	0.318	0.096	0.214
Metal Binding and Homeostasis	0.0851	0.286	0.323	0.00995	0.196
Mitochondrial Metabolism	-0.00266	0.291	0.233	0.0153	0.146
Myelination					
Oxidative Stress	0.178	0.453	0.37	0.266	0.304
Proteostasis	0.0996	0.188	0.274	0.131	0.194
RNA Spliceosome					
Structural Stabilization	0.186	0.311	0.36	0.131	0.323
Synapse	0.0891	0.227	0.276	0.0427	0.148
Tau Homeostasis					
Vasculature	0.146	0.256	0.348	0.0768	0.25
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### Serotonergic synapse

		0010	concrigic syr	iapsc	
Apoptosis	0.158	0.311	0.307	0.11	0.189
APP Metabolism					
Autophagy					
Cell Cycle	0.206	0.447	0.52	0.144	0.257
DNA Repair					
Endolysosome	0.141	0.393	0.457	0.0757	0.317
Epigenetic					
Immune Response	0.0975	0.208	0.374	0.0671	0.21
Lipid Metabolism	-0.0212	0.192	0.233	-0.0372	0.113
Metal Binding and Homeostasis	0.109	0.226	0.284	0.0393	0.14
Mitochondrial Metabolism	-0.0213	0.26	0.214	0.0223	0.117
Myelination					
Oxidative Stress	0.304	0.426	0.599	0.253	0.461
Proteostasis	0.0584	0.217	0.242	0.0665	0.143
RNA Spliceosome					
Structural Stabilization	0.216	0.347	0.373	0.169	0.31
Synapse	0.028	0.216	0.272	-0.0405	0.143
Tau Homeostasis					
Vasculature	0.0505	0.139	0.289	-0.0289	0.204
	WT/WT	WT/FC	FC/FC	WT/VS	VS/V

#### Long-term potentiation

		Long-	-term potent	iation	
Apoptosis	0.00859	0.11	0.199	-0.0906	0.141
APP Metabolism					
Autophagy					
Cell Cycle	0.0718	0.242	0.335	-0.0593	0.252
DNA Repair					
Endolysosome	0.356	0.38	0.586	0.0706	0.426
Epigenetic	0.0939	0.322	0.329	-0.0627	0.227
Immune Response	0.0778	0.181	0.363	-0.122	0.186
Lipid Metabolism	-0.0813	0.21	0.249	-0.18	0.0691
Metal Binding and Homeostasis	0.0507	0.25	0.302	-0.0749	0.188
Mitochondrial Metabolism	0.0603	0.281	0.236	0.0226	0.154
Myelination					
Oxidative Stress					
Proteostasis	0.113	0.178	0.279	0.036	0.157
RNA Spliceosome					
Structural Stabilization	0.241	0.317	0.354	0.0922	0.271
Synapse	0.154	0.281	0.334	0.0409	0.21
Tau Homeostasis					
Vasculature	0.243	0.366	0.51	0.103	0.374
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### Long-term depression

		_	-		
Apoptosis	0.0271	0.28	0.238	-0.0156	0.0775
APP Metabolism					
Autophagy					
Cell Cycle	0.119	0.388	0.487	0.0515	0.285
DNA Repair					
Endolysosome	0.308	0.407	0.489	0.17	0.347
Epigenetic					
Immune Response	0.0839	0.19	0.285	0.0726	0.149
Lipid Metabolism	0.00739	0.192	0.228	0.0321	0.137
Metal Binding and Homeostasis	0.101	0.235	0.239	0.065	0.112
Mitochondrial Metabolism	0.0601	0.25	0.248	0.0967	0.107
Myelination					
Oxidative Stress					
Proteostasis	0.0679	0.181	0.2	0.0448	0.147
RNA Spliceosome					
Structural Stabilization	0.105	0.261	0.328	0.0586	0.189
Synapse	0.0616	0.213	0.249	0.0216	0.0947
Tau Homeostasis					
Vasculature	0.203	0.42	0.597	0.103	0.352
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### Retrograde endocannabinoid signaling 0.24 0.175 -0.118 -0.0468

Apoptosis	-0.0238	0.24	0.175	-0.118	-0.0468
APP Metabolism					
Autophagy					
Cell Cycle	0.137	0.377	0.463	0.0798	0.201
DNA Repair					
Endolysosome	0.0768	0.367	0.414	-0.0844	0.193
Epigenetic					
Immune Response	0.0795	0.211	0.385	-0.0951	0.134
Lipid Metabolism	-0.0326	0.198	0.185	-0.113	0.072
Metal Binding and Homeostasis	0.0373	0.0848	0.163	-0.0289	-0.0692
Mitochondrial Metabolism	-0.253	-0.403	-0.57	-0.151	-0.461
Myelination					
Oxidative Stress	-0.0701	-0.021	-0.23	-0.000201	-0.105
Proteostasis	0.0638	0.0607	0.187	-0.0198	-0.0155
RNA Spliceosome					
Structural Stabilization	0.151	0.176	0.41	0.0745	0.137
Synapse	0.013	0.217	0.277	-0.0782	0.102
Tau Homeostasis					
Vasculature	0.0918	0.178	0.371	-0.0443	0.13
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### Synantic vacials avala

	Synaptic vesicle cycle					
Apoptosis						
APP Metabolism						
Autophagy	0.142	0.274	0.297	0.184	0.0657	
Cell Cycle						
DNA Repair						
Endolysosome	0.194	0.332	0.353	0.163	0.132	
Epigenetic						
Immune Response	0.331	0.279	0.465	0.413	0.44	
Lipid Metabolism	0.0195	0.217	0.241	-0.0135	0.178	
Metal Binding and Homeostasis	-0.105	0.104	0.214	-0.15	0.0515	
Mitochondrial Metabolism	0.158	0.219	0.221	0.174	-0.000198	
Myelination						
Oxidative Stress						
Proteostasis	0.367	0.567	0.611	0.331	0.373	
RNA Spliceosome						
Structural Stabilization	0.142	0.343	0.236	0.173	0.0904	
Synapse	0.143	0.28	0.34	0.121	0.119	
Tau Homeostasis						
Vasculature						
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS	

	Neurotrophin signaling pathway							
Apoptosis	0.0843	0.152	0.131	0.145	0.128			
APP Metabolism								
Autophagy	0.128	0.299	0.254	0.158	0.297			
Cell Cycle	0.157	0.191	0.0917	0.241	0.233			
DNA Repair	0.0943	0.173	0.0766	0.269	0.0681			
Endolysosome	0.179	0.199	0.298	0.181	0.233			
Epigenetic	0.0738	0.223	0.141	0.161	0.0587			
Immune Response	0.101	0.209	0.136	0.165	0.15			
Lipid Metabolism	0.0875	0.211	0.125	0.12	0.103			
Metal Binding and Homeostasis	0.0332	0.0581	0.00907	0.0836	0.107			
NAME OF THE PARTY								

Endolysosome	0.179	0.199	0.298	0.181	0.233
Epigenetic	0.0738	0.223	0.141	0.161	0.0587
Immune Response	0.101	0.209	0.136	0.165	0.15
Lipid Metabolism	0.0875	0.211	0.125	0.12	0.103
Metal Binding and Homeostasis	0.0332	0.0581	0.00907	0.0836	0.107
Mitochondrial Metabolism	0.059	0.228	0.124	0.0543	0.218
Myelination	0.289	0.339	0.269	0.368	0.443

Immune Response	0.101	0.209	0.136	0.165	0.15
Lipid Metabolism	0.0875	0.211	0.125	0.12	0.103
Metal Binding and Homeostasis	0.0332	0.0581	0.00907	0.0836	0.107
Mitochondrial Metabolism	0.059	0.228	0.124	0.0543	0.218
Myelination	0.289	0.339	0.269	0.368	0.443
Oxidative Stress	0.195	0.42	0.274	0.309	0.232
Proteostasis	0.186	0.264	0.23	0.253	0.251
RNA Spliceosome					
Structural Stabilization	0.155	0.241	0.169	0.185	0.231
Synapse	0.101	0.254	0.263	0.102	0.252
Tau Homeostasis					
Vasculature	0.119	0.311	0.247	0.129	0.218
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Mitochondriai Metabolism	0.059	0.228	0.124	0.0543	0.218
Myelination	0.289	0.339	0.269	0.368	0.443
Oxidative Stress	0.195	0.42	0.274	0.309	0.232
Proteostasis	0.186	0.264	0.23	0.253	0.251
RNA Spliceosome					
Structural Stabilization	0.155	0.241	0.169	0.185	0.231
Synapse	0.101	0.254	0.263	0.102	0.252
Tau Homeostasis					
Vasculature	0.119	0.311	0.247	0.129	0.218
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Pho	ototransduct	ion	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis	0.0674	-0.0241	0.0283	-0.00926	0.17
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Olfac	tory transdu	ıction	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome	0.27	0.181	0.332	0.2	0.378
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis	0.0516	0.207	0.416	-0.13	0.213
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.0654	0.0087	0.221	0.104	0.0646
RNA Spliceosome					
Structural Stabilization	0.171	0.143	0.42	0.0359	0.152
Synapse	0.0917	0.0398	0.245	0.0313	0.133
Tau Homeostasis					
Vasculature	0.185	0.288	0.34	0.0777	0.288
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Tas	te transduct	tion	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response	-0.117	0.0321	0.251	-0.0639	-0.117
Lipid Metabolism	-0.0277	0.136	0.21	-0.113	-0.149
Metal Binding and Homeostasis	-0.0809	0.0109	0.201	-0.0254	-0.112
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse	0.000479	0.149	0.182	-0.0304	0.00338
Tau Homeostasis					
Vasculature	0.0971	0.0836	0.312	-6.33e-05	-0.00314
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

# Inflammatory mediator regulation of TRP channels -0.03 0.0534 0.129 -0.0646 0.176

Apoptosis	-0.03	0.0534	0.129	-0.0646	0.176
APP Metabolism					
Autophagy	0.0533	0.127	0.149	0.0239	0.148
Cell Cycle	0.0838	0.229	0.23	0.0217	0.186
DNA Repair					
Endolysosome	0.22	0.143	0.286	0.243	0.231
Epigenetic	-0.00781	0.213	0.182	-0.000335	0.207
Immune Response	-0.007	0.0842	0.0769	-0.0092	0.154
Lipid Metabolism	-0.0579	0.108	0.113	-0.0292	0.109
Metal Binding and Homeostasis	0.046	0.122	0.163	0.00593	0.0937
Mitochondrial Metabolism	-0.0905	0.0937	0.05	-0.0289	0.0836
Myelination					
Oxidative Stress	0.048	0.23	0.103	0.117	0.287
Proteostasis	0.0359	0.0162	0.0905	0.0998	0.0726
RNA Spliceosome					
Structural Stabilization	0.045	0.115	0.165	0.0197	0.177
Synapse	0.0569	0.116	0.152	0.0921	0.143
Tau Homeostasis					
Vasculature	-0.0247	-0.00203	0.0691	-0.0172	0.11
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Α	ΧU	H	y	uı	ua	HC	æ	

			•		
Apoptosis	0.0416	0.187	0.265	0.000425	0.232
APP Metabolism					
Autophagy	0.0951	0.243	0.246	0.134	0.157
Cell Cycle	0.0603	0.138	0.171	0.136	0.17
DNA Repair	0.176	0.134	0.334	0.163	0.259
Endolysosome	0.0783	0.184	0.243	0.0541	0.211
Epigenetic	0.15	0.248	0.2	0.197	0.204
Immune Response	0.112	0.196	0.214	0.109	0.203
Lipid Metabolism	0.0583	0.12	0.259	0.0943	0.15
Metal Binding and Homeostasis	0.0548	0.226	0.177	0.0415	0.207
Mitochondrial Metabolism	0.0938	0.217	0.316	0.0334	0.177
Myelination	0.0482	0.102	0.259	0.0513	0.118
Oxidative Stress	0.294	0.284	0.349	0.463	0.351
Proteostasis	0.143	0.221	0.251	0.157	0.239
RNA Spliceosome					
Structural Stabilization	0.039	0.143	0.199	0.00559	0.125
Synapse	0.129	0.202	0.312	0.0846	0.204
Tau Homeostasis					
Vasculature	0.0752	0.278	0.294	0.0413	0.252
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Osteoclast	differentiation
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		Osicoi	Jiast uniterer	ilialion	
Apoptosis	0.0903	0.222	0.201	0.0656	0.178
APP Metabolism					
Autophagy	0.142	0.153	0.188	0.109	0.229
Cell Cycle	0.206	0.348	0.28	0.147	0.289
DNA Repair	-0.00238	0.16	0.208	-0.129	-0.0133
Endolysosome	0.191	0.225	0.278	0.154	0.222
Epigenetic	0.184	0.361	0.3	0.143	0.21
Immune Response	0.0823	0.169	0.155	0.0927	0.146
Lipid Metabolism	0.0362	0.147	0.138	0.0543	0.166
Metal Binding and Homeostasis	0.0959	0.285	0.256	0.0469	0.172
Mitochondrial Metabolism	0.128	0.22	0.189	0.123	0.163
Myelination					
Oxidative Stress	0.279	0.352	0.336	0.302	0.316
Proteostasis	0.203	0.355	0.334	0.207	0.192
RNA Spliceosome					
Structural Stabilization	0.0829	0.163	0.178	0.0731	0.179
Synapse	0.168	0.322	0.285	0.145	0.277
Tau Homeostasis					
Vasculature	0.172	0.379	0.391	0.126	0.249
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Longevit	y regulating	pathway	
0.000	0.070	0.470	

		Longevit	iy regulatilig	patriway	
Apoptosis	0.101	0.399	0.276	0.176	0.255
APP Metabolism					
Autophagy	0.148	0.39	0.38	0.193	0.157
Cell Cycle	0.141	0.283	0.204	0.19	0.243
DNA Repair	0.207	0.469	0.389	0.297	0.298
Endolysosome	0.0749	0.278	0.328	0.0587	0.201
Epigenetic	0.118	0.307	0.244	0.157	0.272
Immune Response	0.00769	0.216	0.149	0.0835	0.0198
Lipid Metabolism	0.0578	0.327	0.279	0.0668	0.154
Metal Binding and Homeostasis	0.0585	0.284	0.227	0.113	0.158
Mitochondrial Metabolism	0.106	0.407	0.275	0.0885	0.218
Myelination					
Oxidative Stress	0.12	0.632	0.475	0.167	0.282
Proteostasis	0.224	0.384	0.292	0.271	0.258
RNA Spliceosome					
Structural Stabilization	0.0728	0.32	0.306	0.16	0.184
Synapse	0.131	0.276	0.28	0.166	0.189
Tau Homeostasis					
Vasculature	0.0913	0.297	0.265	0.15	0.205
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

# Longevity regulating pathway – multiple species

	Longo	vity rogulatii	ng patimay	maniple openies	
Apoptosis	0.0265	0.352	0.178	0.0783	0.21
APP Metabolism					
Autophagy	-0.0178	0.255	0.291	0.0236	0.0174
Cell Cycle	0.0346	0.204	0.145	0.13	0.188
DNA Repair					
Endolysosome	-0.095	0.0485	0.119	-0.0508	0.0205
Epigenetic	0.0586	0.435	0.252	0.143	0.266
Immune Response	-0.0456	0.213	0.176	-0.0126	0.0437
Lipid Metabolism	-0.0195	0.26	0.239	-0.0263	0.114
Metal Binding and Homeostasis	0.011	0.243	0.175	0.0648	0.0706
Mitochondrial Metabolism	0.0304	0.318	0.244	0.0253	0.178
Myelination					
Oxidative Stress	0.0898	0.488	0.234	0.11	0.264
Proteostasis	0.0432	0.256	0.203	0.0914	0.14
RNA Spliceosome					
Structural Stabilization	0.0206	0.258	0.171	0.0768	0.134
Synapse	-0.0183	0.154	0.178	0.0118	0.0866
Tau Homeostasis					
Vasculature	0.00701	0.257	0.267	0.0146	0.143
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Cir	rcadian rhyth	nm	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic	-0.11	0.366	0.187	-0.192	-0.114
Immune Response					
Lipid Metabolism	-0.131	0.22	0.00639	-0.148	-0.124
Metal Binding and Homeostasis	-0.0847	0.348	0.0429	-0.0967	0.0774
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.0482	0.448	0.327	-0.012	0.135
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Circa	dian	entrain	ment

		Circa	dian entrain	ment	
Apoptosis	0.127	0.281	0.475	-0.0576	0.2
APP Metabolism					
Autophagy					
Cell Cycle	0.159	0.436	0.488	-0.0144	0.383
DNA Repair					
Endolysosome	0.246	0.412	0.726	0.0285	0.409
Epigenetic	0.163	0.481	0.628	-0.0276	0.208
Immune Response	0.097	0.318	0.556	-0.13	0.156
Lipid Metabolism	0.013	0.306	0.395	-0.103	0.0625
Metal Binding and Homeostasis	0.0941	0.231	0.426	-0.0469	0.176
Mitochondrial Metabolism	-0.0806	-0.0761	0.211	-0.247	-0.0703
Myelination					
Oxidative Stress					
Proteostasis	0.065	0.174	0.374	-0.149	-0.0147
RNA Spliceosome					
Structural Stabilization	0.256	0.189	0.509	0.0829	0.229
Synapse	0.102	0.174	0.353	-0.0516	0.119
Tau Homeostasis					
Vasculature	0.117	0.187	0.451	-0.0915	0.177
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### Thermogenesis

Apoptosis	-0.0539	0.113	0.0475	-0.0233	-0.0257
APP Metabolism					
Autophagy	0.0875	0.126	0.399	0.0852	0.011
Cell Cycle	-0.0132	-0.0827	-0.00451	0.0136	-0.0728
DNA Repair	0.0327	-0.059	0.0895	0.0691	-0.0569
Endolysosome	0.0521	-0.00874	0.0289	0.17	-0.371
Epigenetic	-0.0238	0.00263	0.0852	-0.0176	0.0206
Immune Response	-0.0196	0.0376	0.0346	0.00189	-0.0666
Lipid Metabolism	-0.076	0.103	0.0836	-0.0159	-0.0495
Metal Binding and Homeostasis	-0.028	-9.91e-05	-0.118	0.0643	-0.151
Mitochondrial Metabolism	-0.215	-0.324	-0.545	-0.0723	-0.423
Myelination					
Oxidative Stress	-0.256	-0.0935	-0.354	-0.157	-0.227
Proteostasis	0.0712	0.0749	0.0928	0.108	0.0326
RNA Spliceosome					
Structural Stabilization	0.0379	0.0387	0.131	0.0447	-0.041
Synapse	0.0605	0.0874	0.148	0.0828	0.0431
Tau Homeostasis					
Vasculature	0.00497	0.164	0.233	0.14	-0.0185
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### Pathways in cancer

		Patr	nways in car	icer	
Apoptosis	-0.00559	0.117	0.116	0.0749	0.165
APP Metabolism	-0.0915	0.0868	0.174	0.0372	0.104
Autophagy	0.0216	0.139	0.221	0.0846	0.205
Cell Cycle	0.0469	0.16	0.191	0.106	0.182
DNA Repair	0.0452	0.0888	0.227	0.0907	0.0974
Endolysosome	0.0983	0.174	0.168	0.15	0.223
Epigenetic	0.00633	0.108	0.109	0.091	0.146
Immune Response	0.0392	0.108	0.123	0.101	0.166
Lipid Metabolism	0.0157	0.112	0.125	0.0897	0.168
Metal Binding and Homeostasis	-0.0109	0.107	0.162	0.012	0.113
Mitochondrial Metabolism	0.112	0.174	0.164	0.172	0.194
Myelination	0.142	0.198	0.17	0.261	0.282
Oxidative Stress	0.0701	0.25	0.261	0.188	0.263
Proteostasis	0.0789	0.126	0.133	0.156	0.164
RNA Spliceosome					
Structural Stabilization	0.0294	0.0909	0.128	0.104	0.19
Synapse	0.0571	0.122	0.16	0.0962	0.198
Tau Homeostasis					
Vasculature	0.0513	0.134	0.165	0.139	0.224
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

## Transcriptional misregulation in cancer

Apoptosis	-0.00293	0.0349	0.0839	-0.0229	0.0701
APP Metabolism	-0.067	0.131	0.101	-0.0534	0.119
Autophagy	-0.0724	-0.0421	0.113	-0.0217	0.0948
Cell Cycle	0.0475	0.0369	0.0705	0.0755	0.0707
DNA Repair	-0.0107	-0.0589	-0.121	-0.0114	-0.0413
Endolysosome	-0.08	0.0266	0.139	0.0362	0.149
Epigenetic	0.0292	0.105	0.0638	0.0107	0.0908
Immune Response	0.00182	-0.0025	0.0738	0.00111	0.108
Lipid Metabolism	-0.0154	0.0126	0.108	-0.0186	0.0648
Metal Binding and Homeostasis	-0.076	-0.066	0.021	-0.0677	0.0563
Mitochondrial Metabolism	0.111	-0.0233	0.0265	0.248	0.107
Myelination					
Oxidative Stress	-0.0653	0.105	0.18	-0.00481	0.08
Proteostasis	-0.0192	-0.0329	-0.0155	0.0478	-0.0722
RNA Spliceosome					
Structural Stabilization	0.0355	0.0109	0.0666	0.0426	0.0977
Synapse	0.0141	0.131	0.121	0.0897	0.11
Tau Homeostasis					
Vasculature	0.0752	0.156	0.128	0.0689	0.148
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### MicroRNAs in cancer

Apoptosis	-0.0606	0.0824	0.156	-0.0166	0.104
APP Metabolism	-0.0412	-0.00878	0.0708	0.209	0.067
Autophagy	0.0757	0.268	0.27	0.0572	0.112
Cell Cycle	-0.0218	0.0796	0.171	0.0649	0.174
DNA Repair	0.000658	0.129	0.285	0.0239	0.128
Endolysosome	0.157	0.273	0.386	0.156	0.239
Epigenetic	-0.0449	0.0564	0.11	-0.0023	0.124
Immune Response	0.0235	0.105	0.169	0.0362	0.167
Lipid Metabolism	-0.0278	0.0685	0.154	-0.000562	0.132
Metal Binding and Homeostasis	-0.028	-0.00633	0.148	0.0081	0.144
Mitochondrial Metabolism	0.0756	0.187	0.167	0.0584	0.16
Myelination	-0.00997	0.0217	0.142	0.178	0.108
Oxidative Stress	0.0692	0.162	0.198	0.14	0.189
Proteostasis	0.0995	0.174	0.239	0.181	0.248
RNA Spliceosome					
Structural Stabilization	0.0398	0.12	0.179	0.0737	0.21
Synapse	0.109	0.168	0.275	0.116	0.233
Tau Homeostasis					
Vasculature	0.0695	0.13	0.246	0.0858	0.228
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### Proteoglycans in cancer

Apoptosis	0.0316	0.17	0.153	0.1	0.23
APP Metabolism	-0.138	0.0882	0.144	0.0316	0.186
Autophagy	0.0778	0.238	0.264	0.119	0.213
Cell Cycle	-0.0158	0.0533	0.0775	0.036	0.168
DNA Repair	-0.00185	0.123	0.196	0.0655	0.0353
Endolysosome	0.0853	0.0883	0.117	0.137	0.212
Epigenetic	0.0234	0.119	0.133	0.0762	0.196
Immune Response	0.0485	0.0881	0.116	0.0918	0.198
Lipid Metabolism	-0.0519	0.103	0.146	-0.0113	0.156
Metal Binding and Homeostasis	-0.0308	0.068	0.0899	0.0596	0.0855
Mitochondrial Metabolism	0.0751	0.14	0.151	0.0515	0.169
Myelination	0.13	0.164	0.182	0.247	0.171
Oxidative Stress	0.104	0.285	0.245	0.222	0.265
Proteostasis	0.0878	0.126	0.149	0.186	0.212
RNA Spliceosome					
Structural Stabilization	0.0293	0.0714	0.0899	0.0768	0.158
Synapse	0.0651	0.143	0.17	0.0656	0.215
Tau Homeostasis					
Vasculature	0.0441	0.151	0.14	0.104	0.218
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Ch	emical carci	nogenesis -	- DNA addu	cts
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism	0.226	0.327	0.165	0.322	0.123
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.174	0.292	0.1	0.304	0.00507
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

# Chemical carcinogenesis – receptor activation

	Officia	ilical carcinogenesis		receptor activation	
Apoptosis	0.0706	0.211	0.239	0.164	0.282
APP Metabolism					
Autophagy	0.297	0.311	0.346	0.351	0.33
Cell Cycle	0.0973	0.304	0.245	0.166	0.333
DNA Repair	0.0315	0.154	0.312	0.114	0.257
Endolysosome	0.158	0.244	0.298	0.167	0.272
Epigenetic	0.0706	0.177	0.2	0.146	0.265
Immune Response	0.13	0.254	0.28	0.135	0.227
Lipid Metabolism	0.0664	0.235	0.234	0.0918	0.219
Metal Binding and Homeostasis	0.0148	0.147	0.225	0.0395	0.194
Mitochondrial Metabolism	0.228	0.297	0.273	0.27	0.343
Myelination	0.409	0.461	0.318	0.521	0.605
Oxidative Stress	0.291	0.443	0.402	0.424	0.382
Proteostasis	0.147	0.216	0.209	0.224	0.199
RNA Spliceosome					
Structural Stabilization	0.122	0.229	0.276	0.145	0.317
Synapse	0.15	0.257	0.301	0.148	0.281
Tau Homeostasis					
Vasculature	0.167	0.268	0.383	0.161	0.313
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Chemical carcinogenesis – reactive oxygen species					
Apoptosis	0.0557	0.259	0.13	0.0799	0.122	
APP Metabolism						
Autophagy	0.11	0.166	0.207	0.103	0.206	
Cell Cycle	0.192	0.279	0.242	0.249	0.301	
DNA Repair	0.201	0.312	0.348	0.207	0.264	
Endolysosome	0.12	0.0812	0.117	0.205	0.00042	
Epigenetic	0.0288	0.302	0.251	0.0803	0.228	
Immune Response	0.0636	0.203	0.154	0.0951	0.119	
Lipid Metabolism	0.0227	0.137	0.0432	0.114	0.0157	
Metal Binding and Homeostasis	0.0159	0.0177	-0.146	0.1	-0.124	

DNA Repair	0.201	0.312	0.348	0.207	0.264
Endolysosome	0.12	0.0812	0.117	0.205	0.00042
Epigenetic	0.0288	0.302	0.251	0.0803	0.228
Immune Response	0.0636	0.203	0.154	0.0951	0.119
Lipid Metabolism	0.0227	0.137	0.0432	0.114	0.0157
Metal Binding and Homeostasis	0.0159	0.0177	-0.146	0.1	-0.124
Mitochondrial Metabolism	-0.143	-0.25	-0.473	-0.0257	-0.355
Myelination					
Oxidative Stress	0.00376	0.117	-0.0209	0.0698	0.0237
Proteostasis	0.158	0.153	0.121	0.258	0.0743
RNA Spliceosome					
Structural Stabilization	0.124	0.181	0.183	0.169	0.215

Endolysosome	0.12	0.0812	0.117	0.205	0.00042
Epigenetic	0.0288	0.302	0.251	0.0803	0.228
Immune Response	0.0636	0.203	0.154	0.0951	0.119
Lipid Metabolism	0.0227	0.137	0.0432	0.114	0.0157
Metal Binding and Homeostasis	0.0159	0.0177	-0.146	0.1	-0.124
Mitochondrial Metabolism	-0.143	-0.25	-0.473	-0.0257	-0.355
Myelination					
Oxidative Stress	0.00376	0.117	-0.0209	0.0698	0.0237
Proteostasis	0.158	0.153	0.121	0.258	0.0743
RNA Spliceosome					
Structural Stabilization	0.124	0.181	0.183	0.169	0.215
Synapse	0.0829	0.243	0.186	0.123	0.203
Tau Homeostasis					

_p.goo					
Immune Response	0.0636	0.203	0.154	0.0951	0.119
Lipid Metabolism	0.0227	0.137	0.0432	0.114	0.0157
Metal Binding and Homeostasis	0.0159	0.0177	-0.146	0.1	-0.124
Mitochondrial Metabolism	-0.143	-0.25	-0.473	-0.0257	-0.355
Myelination					
Oxidative Stress	0.00376	0.117	-0.0209	0.0698	0.0237
Proteostasis	0.158	0.153	0.121	0.258	0.0743
RNA Spliceosome					
Structural Stabilization	0.124	0.181	0.183	0.169	0.215
Synapse	0.0829	0.243	0.186	0.123	0.203
Tau Homeostasis					
Vasculature	0.0675	0.299	0.234	0.0787	0.162
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

0.0237
0.0237
0.0743
0.215
0.203
0.162
VS/VS

#### Viral carcinogenesis

		vira	i carcinoger	iesis	
Apoptosis	0.00802	0.0715	0.0701	0.0891	0.0663
APP Metabolism	0.0448	0.154	0.301	0.283	-0.0337
Autophagy	0.115	0.117	0.216	0.149	0.119
Cell Cycle	0.0166	0.109	0.0746	0.0537	0.0402
DNA Repair	0.00441	0.0917	0.0474	0.027	-0.00834
Endolysosome	0.133	0.255	0.26	0.139	0.209
Epigenetic	0.0687	0.0888	0.117	0.0681	0.105
Immune Response	0.0302	0.0769	0.102	0.0837	0.106
Lipid Metabolism	0.107	0.21	0.187	0.169	0.153
Metal Binding and Homeostasis	0.0247	0.0214	0.118	-0.0149	-0.0161
Mitochondrial Metabolism	0.0636	0.0627	0.0236	0.145	0.0589
Myelination	0.285	0.331	0.24	0.464	0.186
Oxidative Stress	0.245	0.307	0.279	0.361	0.265
Proteostasis	0.0748	0.15	0.13	0.123	0.0935
RNA Spliceosome					
Structural Stabilization	0.032	0.101	0.0738	0.0496	0.0274
Synapse	0.0776	0.17	0.17	0.0898	0.152
Tau Homeostasis					
Vasculature	0.087	0.275	0.257	0.137	0.197
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### Central carbon metabolism in cancer

Apoptosis	0.00483	0.236	0.113	0.133	0.0782
APP Metabolism					
Autophagy	0.123	0.312	0.27	0.203	0.045
Cell Cycle	0.203	0.213	0.252	0.374	0.326
DNA Repair					
Endolysosome	0.123	0.196	0.268	0.207	0.169
Epigenetic	0.135	0.265	0.246	0.236	0.108
Immune Response	0.115	0.3	0.26	0.176	0.138
Lipid Metabolism	0.151	0.249	0.283	0.158	0.146
Metal Binding and Homeostasis	0.267	0.133	0.21	0.373	0.138
Mitochondrial Metabolism	0.23	0.28	0.286	0.211	0.166
Myelination					
Oxidative Stress	0.0966	0.217	0.304	0.106	0.112
Proteostasis	0.167	0.256	0.236	0.338	0.297
RNA Spliceosome					
Structural Stabilization	0.17	0.287	0.271	0.236	0.247
Synapse	0.15	0.332	0.248	0.227	0.253
Tau Homeostasis					
Vasculature	0.0305	0.273	0.227	0.0853	0.0685
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Choline r	netabolism i	n cancer
Apoptosis	0.0743	0.352	0.369	0.0548

0.221

APP Metabolism Autophagy Cell Cycle DNA Repair Endolysosome Epigenetic Immune Response Lipid Metabolism Vetal Binding and Homeostasis Mitochondrial Metabolism Myelination Oxidative Stress 0.23	9 0.122 13 0.419 3 0.241 54 0.174 68 0.175	0.219 0.47 0.302 0.226 0.172	0.257 0.252 0.207 0.147 0.147 0.119 0.0923 0.153	0.192 0.243 0.0788 0.292 0.189 0.11 0.0778
Cell Cycle  DNA Repair  Endolysosome  Epigenetic  Immune Response  Lipid Metabolism  Vetal Binding and Homeostasis  Mitochondrial Metabolism  Myelination	9 0.122 13 0.419 3 0.241 54 0.174 68 0.175	0.308  0.219  0.47  0.302  0.226  0.172	0.252 0.207 0.147 0.147 0.119 0.0923	0.243 0.0788 0.292 0.189 0.11 0.0778
DNA Repair  Endolysosome  Epigenetic  Immune Response  Lipid Metabolism  Metal Binding and Homeostasis  Mitochondrial Metabolism  Myelination	9 0.122 13 0.419 3 0.241 54 0.174 68 0.175	0.219 0.47 0.302 0.226 0.172	0.207 0.147 0.147 0.119 0.0923	0.0788 0.292 0.189 0.11
Endolysosome Epigenetic Immune Response Lipid Metabolism Outline Response Lipid Metabolism Outline Response Metal Binding and Homeostasis Mitochondrial Metabolism Myelination	3 0.419 3 0.241 54 0.174 68 0.175	0.302 0.226 0.172	0.147 0.147 0.119 0.0923	0.292 0.189 0.11 0.0778
Epigenetic  Immune Response  Lipid Metabolism  Outline Response  Lipid Metabolism  Metal Binding and Homeostasis  Mitochondrial Metabolism  Myelination	3 0.419 3 0.241 54 0.174 68 0.175	0.302 0.226 0.172	0.147 0.147 0.119 0.0923	0.292 0.189 0.11 0.0778
Immune Response Lipid Metabolism 0.033 Metal Binding and Homeostasis Mitochondrial Metabolism 0.093 Myelination	3 0.241 54 0.174 68 0.175	0.302 0.226 0.172	0.147 0.119 0.0923	0.189 0.11 0.0778
Lipid Metabolism  output  Lipid Metabolism  output  detail Binding and Homeostasis  Mitochondrial Metabolism  Myelination	54 0.174 68 0.175	0.226	0.119 0.0923	0.11 0.0778
Metal Binding and Homeostasis  Mitochondrial Metabolism  Myelination	68 0.175	5 0.172	0.0923	0.0778
Mitochondrial Metabolism  Myelination				
Myelination	26 0.302	0.262	0.153	0.186
Oxidative Stress 0.23				
	0.607	0.584	0.323	0.413
Proteostasis 0.19	0.306	0.316	0.26	0.257
RNA Spliceosome				
Structural Stabilization 0.18	5 0.149	0.308	0.162	0.189
Synapse 0.040	87 0.158	0.239	0.086	0.144
Tau Homeostasis				
Vasculature 0.022	22 0.239	0.343	0.0295	0.165
WT/	WT WT/F	FC FC/F	C WT/VS	S VS/VS

### PD\_I 1 expression and PD\_1 checkpoint nathway in cancer.

ŀ	D–L1 expr	ession and	PD-1 check	point pathw	ay in cancei
Apoptosis	-0.0017	0.178	0.102	0.0162	0.113
APP Metabolism					
Autophagy	0.101	0.311	0.314	0.194	0.243
Cell Cycle	0.0655	0.199	0.15	0.0568	0.144
DNA Repair	-0.172	0.0615	0.173	-0.184	-0.0755
Endolysosome	0.0919	0.231	0.212	0.0337	0.228
Epigenetic	0.0432	0.336	0.196	0.0812	0.163
Immune Response	0.0649	0.196	0.121	0.061	0.0915
Lipid Metabolism	0.0263	0.204	0.193	0.0555	0.128
Metal Binding and Homeostasis	0.0794	0.302	0.194	0.0279	0.171
Mitochondrial Metabolism	0.142	0.258	0.212	0.146	0.144
Myelination					
Oxidative Stress	0.173	0.655	0.454	0.226	0.341
Proteostasis	0.177	0.356	0.32	0.159	0.253
RNA Spliceosome					
Structural Stabilization	0.039	0.183	0.138	0.0165	0.126
Synapse	0.131	0.307	0.291	0.12	0.216
Tau Homeostasis					
Vasculature	-0.00402	0.287	0.26	-0.0851	0.0145
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### Colorectal cancer

Apoptosis	0.0624	0.217	0.269	0.143	0.213
APP Metabolism					
Autophagy	0.165	0.341	0.389	0.28	0.285
Cell Cycle	0.0599	0.161	0.256	0.175	0.215
DNA Repair	0.0527	0.0699	0.244	0.174	0.0713
Endolysosome	0.125	0.243	0.338	0.129	0.243
Epigenetic	0.075	0.247	0.249	0.164	0.238
Immune Response	0.0828	0.266	0.295	0.123	0.232
Lipid Metabolism	0.157	0.402	0.42	0.174	0.339
Metal Binding and Homeostasis	0.05	0.192	0.212	0.188	0.213
Mitochondrial Metabolism	0.193	0.388	0.307	0.197	0.295
Myelination	0.365	0.445	0.369	0.483	0.519
Oxidative Stress	0.304	0.553	0.552	0.449	0.463
Proteostasis	0.183	0.252	0.301	0.286	0.244
RNA Spliceosome					
Structural Stabilization	0.101	0.193	0.269	0.146	0.274
Synapse	0.123	0.347	0.381	0.109	0.352
Tau Homeostasis					
Vasculature	0.162	0.319	0.318	0.16	0.323
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Pai	Pancreatic cancer			

Apoptosis	0.0988	0.273	0.226	0.208	0.252
APP Metabolism					
Autophagy	0.187	0.298	0.368	0.328	0.251
Cell Cycle	0.146	0.26	0.248	0.312	0.317
DNA Repair	0.103	0.127	0.166	0.259	0.167
Endolysosome	0.014	0.228	0.271	0.0988	0.25
Epigenetic	0.0319	0.253	0.179	0.118	0.201
Immune Response	0.1	0.284	0.269	0.156	0.255
Lipid Metabolism	0.111	0.28	0.247	0.147	0.263
Metal Binding and Homeostasis	0.0227	0.296	0.255	0.056	0.267
Mitochondrial Metabolism	0.212	0.36	0.247	0.276	0.271
Myelination					
Oxidative Stress	0.242	0.513	0.413	0.402	0.376
Proteostasis	0.151	0.243	0.203	0.259	0.226
RNA Spliceosome					
Structural Stabilization	0.0813	0.244	0.206	0.189	0.262
Synapse	0.149	0.347	0.337	0.196	0.332
Tau Homeostasis					
Vasculature	0.142	0.322	0.322	0.18	0.263
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Hepato	cellular	car	cinoma	

Apoptosis	0.0482	0.128	0.148	0.107	0.217
APP Metabolism					
Autophagy	0.29	0.31	0.315	0.293	0.296
Cell Cycle	0.0362	0.033	0.122	0.0664	0.19
DNA Repair	0.0835	-0.0142	0.115	0.0951	0.103
Endolysosome	0.119	0.0683	0.0865	0.175	0.177
Epigenetic	-0.00563	0.0179	0.0497	0.00624	0.161
Immune Response	0.13	0.143	0.149	0.0999	0.217
Lipid Metabolism	0.105	0.159	0.186	0.0963	0.229
letal Binding and Homeostasis	-0.0476	-0.00621	0.0596	-0.0777	0.153
Mitochondrial Metabolism	0.248	0.277	0.209	0.232	0.236
Myelination	0.318	0.425	0.291	0.435	0.384
Oxidative Stress	0.202	0.291	0.235	0.278	0.296
Proteostasis	0.199	0.19	0.218	0.222	0.269
RNA Spliceosome					
Structural Stabilization	0.0825	0.115	0.128	0.077	0.179
Synapse	0.146	0.159	0.188	0.11	0.248
Tau Homeostasis					
Vasculature	0.0968	0.168	0.197	0.108	0.278
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Gastric	

0.0044	0.400	0.470	0.400	0.00
0.0344	0.183	0.176	0.139	0.26
0.206	0.404	0.386	0.255	0.414
0.0695	0.162	0.205	0.136	0.275
0.0386	0.0485	0.249	0.164	0.165
0.153	0.141	0.135	0.173	0.217
0.0304	0.125	0.0999	0.121	0.217
0.153	0.236	0.214	0.15	0.33
0.113	0.224	0.199	0.129	0.294
0.0573	0.0609	0.128	0.175	0.25
0.245	0.303	0.263	0.239	0.399
0.19	0.301	0.174	0.379	0.364
0.295	0.411	0.422	0.42	0.511
0.16	0.182	0.162	0.218	0.269
0.0614	0.194	0.159	0.0866	0.231
0.121	0.241	0.215	0.12	0.317
0.118	0.268	0.194	0.142	0.3
WT/WT	WT/FC	FC/FC	WT/VS	VS/VS
	0.0695 0.0386 0.153 0.0304 0.153 0.113 0.0573 0.245 0.19 0.295 0.16  0.0614 0.121	0.206       0.404         0.0695       0.162         0.0386       0.0485         0.153       0.141         0.0304       0.125         0.153       0.236         0.113       0.224         0.0573       0.0609         0.245       0.303         0.19       0.301         0.295       0.411         0.16       0.182         0.0614       0.194         0.121       0.241	0.206       0.404       0.386         0.0695       0.162       0.205         0.0386       0.0485       0.249         0.153       0.141       0.135         0.0304       0.125       0.0999         0.153       0.236       0.214         0.113       0.224       0.199         0.0573       0.0609       0.128         0.245       0.303       0.263         0.19       0.301       0.174         0.295       0.411       0.422         0.16       0.182       0.162         0.0614       0.194       0.159         0.121       0.241       0.215	0.206       0.404       0.386       0.255         0.0695       0.162       0.205       0.136         0.0386       0.0485       0.249       0.164         0.153       0.141       0.135       0.173         0.0304       0.125       0.0999       0.121         0.153       0.236       0.214       0.15         0.113       0.224       0.199       0.129         0.0573       0.0609       0.128       0.175         0.245       0.303       0.263       0.239         0.19       0.301       0.174       0.379         0.295       0.411       0.422       0.42         0.16       0.182       0.162       0.218         0.0614       0.194       0.159       0.0866         0.121       0.241       0.215       0.12         0.118       0.268       0.194       0.142

			Cliama		
Anontonio			Glioma		
Apoptosis	0.0713	0.169	0.177	0.143	0.197
APP Metabolism					
Autophagy	0.182	0.288	0.265	0.216	0.162
Cell Cycle	0.152	0.188	0.23	0.234	0.292
DNA Repair	0.129	0.152	0.238	0.25	0.0912
Endolysosome	0.306	0.297	0.493	0.279	0.285
Epigenetic	0.0683	0.18	0.189	0.172	0.248
Immune Response	0.101	0.184	0.233	0.0932	0.247
Lipid Metabolism	0.114	0.141	0.21	0.196	0.258
Metal Binding and Homeostasis	0.135	0.167	0.153	0.114	0.222
Mitochondrial Metabolism	0.248	0.329	0.296	0.234	0.357
Myelination	0.317	0.428	0.387	0.285	0.425
Oxidative Stress	0.304	0.269	0.307	0.471	0.333
Proteostasis	0.265	0.255	0.286	0.352	0.277
RNA Spliceosome					
Structural Stabilization	0.17	0.191	0.273	0.169	0.239
Synapse	0.202	0.241	0.298	0.167	0.281
Tau Homeostasis					
Vasculature	0.153	0.262	0.346	0.13	0.285
·	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Thyroid cancer	

		•	riyiola carice	1	
Apoptosis	0.192	0.237	0.229	0.324	0.32
APP Metabolism					
Autophagy					
Cell Cycle	0.104	0.0936	0.232	0.254	0.194
DNA Repair	0.14	0.0261	0.136	0.335	0.165
Endolysosome					
Epigenetic	0.062	-0.00694	0.156	0.172	0.205
Immune Response	0.225	0.195	0.289	0.293	0.353
Lipid Metabolism	0.271	0.362	0.383	0.308	0.39
Metal Binding and Homeostasis	0.118	0.104	0.21	0.278	0.238
Mitochondrial Metabolism	0.428	0.417	0.484	0.451	0.493
Myelination					
Oxidative Stress					
Proteostasis	0.189	0.224	0.212	0.289	0.327
RNA Spliceosome					
Structural Stabilization	-0.00198	0.109	0.215	-0.00405	0.171
Synapse	0.302	0.355	0.344	0.341	0.408
Tau Homeostasis					
Vasculature	0.36	0.331	0.426	0.391	0.461
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Acute	myeloid leu	kemia
Apoptosis	0.0129	0.0943	0.161	0.104

0.133

APP Metabolism     Autophagy
Cell Cycle       0.156       0.0812       0.217       0.254       0.163         DNA Repair       0.111       0.1       0.464       0.143       0.194         Endolysosome       0.125       0.0795       0.312       0.129       0.161         Epigenetic       0.022       0.0581       0.0657       0.0976       0.0856         Immune Response       0.0916       0.135       0.197       0.0899       0.142         Lipid Metabolism       0.0811       0.2       0.193       0.151       0.13
DNA Repair         0.111         0.1         0.464         0.143         0.194           Endolysosome         0.125         0.0795         0.312         0.129         0.161           Epigenetic         0.022         0.0581         0.0657         0.0976         0.0856           Immune Response         0.0916         0.135         0.197         0.0899         0.142           Lipid Metabolism         0.0811         0.2         0.193         0.151         0.13
Endolysosome         0.125         0.0795         0.312         0.129         0.161           Epigenetic         0.022         0.0581         0.0657         0.0976         0.0856           Immune Response         0.0916         0.135         0.197         0.0899         0.142           Lipid Metabolism         0.0811         0.2         0.193         0.151         0.13
Epigenetic         0.022         0.0581         0.0657         0.0976         0.0856           Immune Response         0.0916         0.135         0.197         0.0899         0.142           Lipid Metabolism         0.0811         0.2         0.193         0.151         0.13
Immune Response         0.0916         0.135         0.197         0.0899         0.142           Lipid Metabolism         0.0811         0.2         0.193         0.151         0.13
Lipid Metabolism 0.0811 0.2 0.193 0.151 0.13
Actal Dinding and Hamacetacic 00470 00070 044
Tetal Binding and Homeostasis 0.0179 -0.00249 0.11 0.0872 0.122
Mitochondrial Metabolism 0.308 0.393 0.312 0.319 0.257
Myelination
Oxidative Stress
Proteostasis 0.231 0.229 0.268 0.294 0.211
RNA Spliceosome
Structural Stabilization 0.113 0.173 0.254 0.187 0.225
Synapse 0.134 0.315 0.336 0.169 0.224
Tau Homeostasis
Vasculature 0.0484 0.295 0.293 0.0235 0.128
WT/WT WT/FC FC/FC WT/VS VS/VS

Chronic	c myeloid l	leukemia

Apoptosis	0.0586	0.149	0.0679	0.164	0.155
APP Metabolism					
Autophagy	0.289	0.298	0.333	0.358	0.298
Cell Cycle	0.135	0.161	0.173	0.272	0.229
DNA Repair	0.131	0.123	0.218	0.244	0.164
Endolysosome	0.249	0.246	0.345	0.266	0.266
Epigenetic	0.0427	0.0965	-0.0177	0.141	0.0681
Immune Response	0.0851	0.137	0.106	0.0929	0.151
Lipid Metabolism	0.105	0.171	0.149	0.157	0.208
letal Binding and Homeostasis	0.0536	0.126	0.0947	0.137	0.219
Mitochondrial Metabolism	0.376	0.366	0.236	0.4	0.341
Myelination	0.423	0.438	0.241	0.573	0.353
Oxidative Stress	0.294	0.334	0.334	0.467	0.347
Proteostasis	0.227	0.228	0.22	0.315	0.272
RNA Spliceosome					
Structural Stabilization	0.0577	0.146	0.152	0.113	0.201
Synapse	0.16	0.251	0.239	0.175	0.24
Tau Homeostasis					
Vasculature	0.126	0.264	0.248	0.118	0.26
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Basa	al cell carcin	oma	
Apoptosis	0.16	0.241	0.192	0.285	0.291
APP Metabolism					
Autophagy					
Cell Cycle	0.17	0.133	0.201	0.311	0.186
DNA Repair	0.213	0.112	0.139	0.28	0.229
Endolysosome	0.186	0.0697	-0.0686	0.257	0.219
Epigenetic	0.0693	0.0479	0.00847	0.187	0.149
Immune Response	0.167	0.148	0.0981	0.224	0.277
Lipid Metabolism	0.138	0.124	0.126	0.219	0.28
Metal Binding and Homeostasis	0.0315	0.0891	0.0387	0.187	0.114
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.234	0.17	0.143	0.296	0.294
RNA Spliceosome					
Structural Stabilization	0.0899	0.122	0.0757	0.129	0.164
Synapse	0.221	0.257	0.179	0.252	0.295
Tau Homeostasis					
Vasculature	0.221	0.187	0.0928	0.352	0.347
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

			Melanoma		
Apoptosis	0.155	0.336	0.25	0.231	0.321
APP Metabolism					
Autophagy					
Cell Cycle	0.148	0.21	0.239	0.261	0.321
DNA Repair	0.165	0.198	0.229	0.286	0.219
Endolysosome	0.209	0.258	0.306	0.215	0.258
Epigenetic	0.0541	0.277	0.204	0.13	0.313
Immune Response	0.22	0.318	0.317	0.233	0.432
Lipid Metabolism	0.191	0.27	0.238	0.254	0.34
Metal Binding and Homeostasis	0.114	0.229	-0.0081	0.279	0.159
Mitochondrial Metabolism	0.367	0.468	0.361	0.347	0.516
Myelination					
Oxidative Stress	0.246	0.362	0.405	0.371	0.437
Proteostasis	0.229	0.256	0.182	0.354	0.33
RNA Spliceosome					
Structural Stabilization	0.128	0.258	0.242	0.16	0.303
Synapse	0.215	0.344	0.276	0.203	0.403
Tau Homeostasis					
Vasculature	0.183	0.347	0.307	0.209	0.298
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

## Renal cell carcinoma

		IXCIII	ai ceii careii	oma	
Apoptosis	0.183	0.383	0.297	0.169	0.327
APP Metabolism					
Autophagy	0.237	0.452	0.394	0.204	0.347
Cell Cycle	0.228	0.296	0.269	0.33	0.381
DNA Repair	0.228	0.168	0.337	0.142	0.129
Endolysosome	0.25	0.371	0.32	0.219	0.328
Epigenetic	0.147	0.262	0.258	0.18	0.301
Immune Response	0.132	0.299	0.229	0.133	0.286
Lipid Metabolism	0.184	0.34	0.253	0.211	0.294
Metal Binding and Homeostasis	0.0983	0.237	0.0809	0.186	0.283
Mitochondrial Metabolism	0.24	0.446	0.312	0.195	0.355
Myelination					
Oxidative Stress	0.284	0.54	0.543	0.337	0.521
Proteostasis	0.251	0.378	0.277	0.313	0.393
RNA Spliceosome					
Structural Stabilization	0.224	0.408	0.311	0.209	0.368
Synapse	0.147	0.44	0.342	0.103	0.44
Tau Homeostasis					
Vasculature	0.0992	0.392	0.299	0.135	0.373
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	В	ladder canc	er
0.0794	0 141	0.202	

		D	iauuei canc	CI CI	
Apoptosis	0.0794	0.141	0.202	0.256	0.307
APP Metabolism					
Autophagy					
Cell Cycle	0.0977	0.113	0.186	0.326	0.277
DNA Repair	0.0668	0.0697	0.287	0.368	0.318
Endolysosome	0.223	0.185	0.221	0.303	0.271
Epigenetic	0.0251	0.15	0.21	0.261	0.287
Immune Response	0.197	0.176	0.322	0.307	0.344
Lipid Metabolism	0.19	0.237	0.358	0.319	0.357
Metal Binding and Homeostasis	0.152	0.206	0.123	0.317	0.174
Mitochondrial Metabolism	0.409	0.492	0.436	0.438	0.46
Myelination					
Oxidative Stress	0.165	0.125	0.433	0.3	0.328
Proteostasis	0.127	0.117	0.167	0.285	0.285
RNA Spliceosome					
Structural Stabilization	0.153	0.143	0.232	0.292	0.328
Synapse	0.217	0.31	0.312	0.245	0.417
Tau Homeostasis					
Vasculature	0.265	0.315	0.37	0.398	0.397
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### Prostate cancer

Apoptosis	-0.00478	0.188	0.127	0.0574	0.244
APP Metabolism					
Autophagy	0.165	0.358	0.359	0.145	0.376
Cell Cycle	0.0685	0.265	0.229	0.148	0.308
DNA Repair	0.0113	0.117	0.287	0.0634	0.21
Endolysosome	0.185	0.245	0.361	0.211	0.256
Epigenetic	-0.0214	0.108	0.0965	0.0626	0.222
Immune Response	0.062	0.202	0.167	0.0907	0.238
Lipid Metabolism	0.0781	0.222	0.168	0.13	0.267
Metal Binding and Homeostasis	-0.0378	0.0671	0.0757	0.0178	0.197
Mitochondrial Metabolism	0.19	0.357	0.272	0.148	0.352
Myelination	0.32	0.437	0.343	0.456	0.529
Oxidative Stress	0.163	0.286	0.269	0.336	0.343
Proteostasis	0.11	0.212	0.198	0.209	0.264
RNA Spliceosome					
Structural Stabilization	0.0721	0.233	0.244	0.164	0.31
Synapse	0.109	0.378	0.269	0.166	0.349
Tau Homeostasis					
Vasculature	0.094	0.295	0.303	0.141	0.308
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Endometrial cancer	

		End	iomethai car	icei	
Apoptosis	0.0742	0.194	0.203	0.205	0.223
APP Metabolism					
Autophagy					
Cell Cycle	0.15	0.0994	0.232	0.321	0.243
DNA Repair	0.118	0.0274	0.214	0.248	0.154
Endolysosome	0.265	0.237	0.318	0.288	0.268
Epigenetic	0.0364	0.126	0.168	0.152	0.222
Immune Response	0.215	0.278	0.298	0.277	0.29
Lipid Metabolism	0.191	0.322	0.311	0.207	0.329
Metal Binding and Homeostasis	0.104	0.128	0.0425	0.32	0.209
Mitochondrial Metabolism	0.309	0.489	0.35	0.286	0.394
Myelination	0.36	0.432	0.34	0.569	0.507
Oxidative Stress	0.397	0.502	0.521	0.535	0.401
Proteostasis	0.252	0.24	0.279	0.362	0.285
RNA Spliceosome					
Structural Stabilization	0.0941	0.204	0.267	0.156	0.234
Synapse	0.135	0.332	0.321	0.157	0.33
Tau Homeostasis					
Vasculature	0.156	0.354	0.315	0.135	0.354
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		E	Breast cance	r
Apoptosis	0.0702	0.216	0.237	

0.2

0.255

' '					
APP Metabolism					
Autophagy Cell Cycle	0.138	0.215	0.288	0.206	0.319
DNA Repair	0.107	0.125	0.31	0.225	0.211
Endolysosome	0.186	0.13	0.145	0.234	0.245
Epigenetic	0.0538	0.152	0.218	0.163	0.239
Immune Response	0.197	0.239	0.256	0.231	0.316
Lipid Metabolism	0.109	0.22	0.25	0.165	0.281
Metal Binding and Homeostasis	0.0637	0.173	0.22	0.181	0.196
Mitochondrial Metabolism	0.288	0.401	0.338	0.238	0.407
Myelination	0.286	0.3	0.313	0.459	0.386
Oxidative Stress	0.376	0.531	0.543	0.46	0.44
Proteostasis	0.226	0.234	0.252	0.315	0.307
RNA Spliceosome					
Structural Stabilization	0.111	0.163	0.186	0.18	0.244
Synapse	0.161	0.253	0.221	0.18	0.309
Tau Homeostasis					
Vasculature	0.135	0.26	0.273	0.205	0.306
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

## Small cell lung cancer

Apoptosis	-0.034	0.132	0.0546	0.068	0.132
APP Metabolism					
Autophagy	0.0208	0.318	0.271	0.155	0.266
Cell Cycle	0.0514	0.224	0.159	0.206	0.16
DNA Repair	-0.0155	0.111	0.121	0.171	0.157
Endolysosome					
Epigenetic	-0.0536	0.0474	-0.0122	0.0687	0.0351
Immune Response	0.00162	0.0961	0.0682	0.113	0.126
Lipid Metabolism	-0.00531	0.142	0.0794	0.151	0.0928
Metal Binding and Homeostasis	-0.0498	0.0278	0.126	0.127	0.118
Mitochondrial Metabolism	0.117	0.097	0.0214	0.31	0.278
Myelination					
Oxidative Stress	0.115	0.259	0.208	0.445	0.267
Proteostasis	0.0527	0.075	0.0816	0.188	0.156
RNA Spliceosome					
Structural Stabilization	-0.0548	-0.0202	0.0548	0.133	0.0958
Synapse	0.0954	0.102	0.134	0.29	0.242
Tau Homeostasis					
Vasculature	0.0333	0.148	0.24	0.154	0.25
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Non-sn	nall cell lung	cancer	
Apopto	SIS 0.0797	0.224	0.24	0.16	

Apoptosis	0.0797	0.224	0.24	0.16	0.242
APP Metabolism					
Autophagy	0.247	0.36	0.321	0.303	0.324
Cell Cycle	0.117	0.15	0.194	0.223	0.233
DNA Repair	0.223	0.171	0.218	0.32	0.193
Endolysosome	0.232	0.28	0.356	0.357	0.364
Epigenetic	0.061	0.184	0.217	0.143	0.212
Immune Response	0.149	0.266	0.253	0.175	0.262
Lipid Metabolism	0.176	0.214	0.262	0.288	0.302
Metal Binding and Homeostasis	0.102	0.103	0.154	0.201	0.147
Mitochondrial Metabolism	0.221	0.302	0.29	0.25	0.341
Myelination					

Lipid Metabolism	0.176	0.214	0.262	0.288	0.302
Metal Binding and Homeostasis	0.102	0.103	0.154	0.201	0.147
Mitochondrial Metabolism	0.221	0.302	0.29	0.25	0.341
Myelination					
Oxidative Stress	0.307	0.399	0.417	0.405	0.376
Proteostasis	0.289	0.296	0.281	0.347	0.325
RNA Spliceosome					
Structural Stabilization	0.0794	0.199	0.207	0.0951	0.238
Synapse	0.129	0.239	0.274	0.132	0.377
Tau Homeostasis					

O .					
Mitochondrial Metabolism	0.221	0.302	0.29	0.25	0.341
Myelination					
Oxidative Stress	0.307	0.399	0.417	0.405	0.376
Proteostasis	0.289	0.296	0.281	0.347	0.325
RNA Spliceosome					
Structural Stabilization	0.0794	0.199	0.207	0.0951	0.238
Synapse	0.129	0.239	0.274	0.132	0.377
Tau Homeostasis					
Vasculature	0.104	0.285	0.334	0.0399	0.269
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

IS	0.289	0.296	0.281	0.347	0.325
e					
n	0.0794	0.199	0.207	0.0951	0.238
е	0.129	0.239	0.274	0.132	0.377
is					
е	0.104	0.285	0.334	0.0399	0.269
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

# Human T-cell leukemia virus 1 infection

Apoptosis	0.0191	0.0993	0.0719	0.0857	0.13
APP Metabolism					
Autophagy	0.000748	0.0897	0.0408	0.101	0.00795
Cell Cycle	0.0622	0.113	0.0843	0.0951	0.0831
DNA Repair	-0.0602	-0.0235	0.0573	-0.0379	0.0527
Endolysosome	0.0196	0.0772	0.192	0.0433	0.2
Epigenetic	0.0663	0.146	0.173	0.111	0.159
Immune Response	0.0477	0.138	0.109	0.089	0.131
Lipid Metabolism	0.036	0.169	0.113	0.0934	0.113
Metal Binding and Homeostasis	0.0157	0.189	0.208	0.0172	0.173
Mitochondrial Metabolism	0.136	0.19	0.124	0.144	0.152
Myelination	0.427	0.501	0.374	0.57	0.421
Oxidative Stress	0.214	0.508	0.376	0.276	0.305
Proteostasis	0.0798	0.124	0.109	0.122	0.109
RNA Spliceosome					
Structural Stabilization	0.0499	0.0784	0.111	0.0947	0.138
Synapse	0.0774	0.171	0.18	0.076	0.156
Tau Homeostasis					
Vasculature	0.0913	0.151	0.205	0.0787	0.191
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

## Human immunodeficiency virus 1 infection

Apoptosis	-0.00539	0.116	0.079	-0.00679	0.0924
APP Metabolism					
Autophagy	-0.0149	0.122	0.0566	-0.0214	0.125
Cell Cycle	0.0791	0.266	0.215	0.0472	0.18
DNA Repair	0.0165	0.134	0.147	0.0204	0.0587
Endolysosome	0.0587	0.0855	0.0917	0.112	0.137
Epigenetic	-0.0212	0.181	0.0884	0.0131	0.118
Immune Response	0.00854	0.0722	0.0232	0.031	0.0755
Lipid Metabolism	-0.0449	0.0761	0.00438	0.00303	0.0303
Metal Binding and Homeostasis	0.126	0.235	0.127	0.111	0.203
Mitochondrial Metabolism	0.0836	0.163	0.0926	0.121	0.142
Myelination	0.353	0.423	0.377	0.353	0.514
Oxidative Stress	0.204	0.491	0.317	0.312	0.337
Proteostasis	0.0995	0.19	0.134	0.119	0.15
RNA Spliceosome					
Structural Stabilization	0.0648	0.161	0.109	0.0311	0.182
Synapse	0.118	0.277	0.22	0.0907	0.23
Tau Homeostasis					
Vasculature	0.125	0.22	0.215	0.126	0.155
·	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Н	е	p	a	ti	ti	S	В	
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			nepatitis D		
Apoptosis	-0.0113	0.12	0.102	0.0601	0.166
APP Metabolism					
Autophagy	0.114	0.249	0.253	0.161	0.258
Cell Cycle	0.0496	0.201	0.223	0.0847	0.169
DNA Repair	-0.00857	-0.0307	0.0992	0.0655	0.00245
Endolysosome	0.12	0.164	0.188	0.186	0.273
Epigenetic	-0.00602	0.145	0.145	0.0643	0.135
Immune Response	0.00613	0.136	0.117	0.0654	0.132
Lipid Metabolism	0.00204	0.174	0.0998	0.0886	0.175
Metal Binding and Homeostasis	0.0145	0.233	0.278	0.0185	0.246
Mitochondrial Metabolism	0.106	0.181	0.141	0.182	0.176
Myelination	0.341	0.502	0.381	0.458	0.53
Oxidative Stress	0.217	0.503	0.458	0.292	0.367
Proteostasis	0.138	0.203	0.223	0.174	0.238
RNA Spliceosome					
Structural Stabilization	0.0422	0.188	0.185	0.0704	0.205
Synapse	0.089	0.31	0.289	0.0674	0.283
Tau Homeostasis					
Vasculature	0.0629	0.206	0.25	0.0838	0.19
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Apoptosis APP Metabolism Autophagy Cell Cycle DNA Repair Endolysosome Cepigenetic Lipid Metabolism  Autophagy  0.0446 0.193 0.285 0.384 0.198 0.259 0.241  DNA Repair 0.098 0.0596 0.217 0.272  Endolysosome 0.0446 0.118 0.232 0.129  Epigenetic -0.0724 0.0328 0.0407 0.0271  Immune Response -0.0208 0.072 0.0584 0.051  Lipid Metabolism 0.0964 0.203 0.145 0.18  Metal Binding and Homeostasis -0.0226 0.0781 0.145 0.0719  Mitochondrial Metabolism 0.167 0.208 0.178 0.249  Myelination 0.433 0.583 0.425 0.58  Oxidative Stress 0.0586 0.256 0.265 0.273  Proteostasis 0.0648 0.17 0.149 0.136	0.0987  0.175  0.236  0.161  0.125  0.0318  0.0198  0.112  0.0594  0.178
Autophagy Cell Cycle 0.0946 0.193 0.259 0.241  DNA Repair 0.098 0.0596 0.217 0.272  Endolysosome 0.0446 0.118 0.232 0.129  Epigenetic -0.0724 0.0328 0.0407 0.0271  Immune Response -0.0208 0.072 0.0584 0.051  Lipid Metabolism 0.0964 0.203 0.145 0.18  Metal Binding and Homeostasis -0.0226 0.0781 0.145 0.0719  Mitochondrial Metabolism 0.167 0.208 0.178 0.249  Myelination 0.433 0.583 0.425 0.58  Oxidative Stress 0.0586 0.256 0.265 0.273	0.236 0.161 0.125 0.0318 0.0198 0.112 0.0594
Cell Cycle       0.0946       0.193       0.259       0.241         DNA Repair       0.098       0.0596       0.217       0.272         Endolysosome       0.0446       0.118       0.232       0.129         Epigenetic       -0.0724       0.0328       0.0407       0.0271         Immune Response       -0.0208       0.072       0.0584       0.051         Lipid Metabolism       0.0964       0.203       0.145       0.18         Metal Binding and Homeostasis       -0.0226       0.0781       0.145       0.0719         Mitochondrial Metabolism       0.167       0.208       0.178       0.249         Myelination       0.433       0.583       0.425       0.58         Oxidative Stress       0.0586       0.256       0.265       0.273	0.236 0.161 0.125 0.0318 0.0198 0.112 0.0594
DNA Repair 0.098 0.0596 0.217 0.272  Endolysosome 0.0446 0.118 0.232 0.129  Epigenetic -0.0724 0.0328 0.0407 0.0271  Immune Response -0.0208 0.072 0.0584 0.051  Lipid Metabolism 0.0964 0.203 0.145 0.18  Metal Binding and Homeostasis -0.0226 0.0781 0.145 0.0719  Mitochondrial Metabolism 0.167 0.208 0.178 0.249  Myelination 0.433 0.583 0.425 0.58  Oxidative Stress 0.0586 0.256 0.265 0.273	0.161 0.125 0.0318 0.0198 0.112 0.0594
Endolysosome 0.0446 0.118 0.232 0.129  Epigenetic -0.0724 0.0328 0.0407 0.0271  Immune Response -0.0208 0.072 0.0584 0.051  Lipid Metabolism 0.0964 0.203 0.145 0.18  Metal Binding and Homeostasis -0.0226 0.0781 0.145 0.0719  Mitochondrial Metabolism 0.167 0.208 0.178 0.249  Myelination 0.433 0.583 0.425 0.58  Oxidative Stress 0.0586 0.256 0.256 0.265 0.273	0.125 0.0318 0.0198 0.112 0.0594
Epigenetic -0.0724 0.0328 0.0407 0.0271  Immune Response -0.0208 0.072 0.0584 0.051  Lipid Metabolism 0.0964 0.203 0.145 0.18  Metal Binding and Homeostasis -0.0226 0.0781 0.145 0.0719  Mitochondrial Metabolism 0.167 0.208 0.178 0.249  Myelination 0.433 0.583 0.425 0.58  Oxidative Stress 0.0586 0.256 0.265 0.273	0.0318 0.0198 0.112 0.0594
Immune Response         -0.0208         0.072         0.0584         0.051           Lipid Metabolism         0.0964         0.203         0.145         0.18           Metal Binding and Homeostasis         -0.0226         0.0781         0.145         0.0719           Mitochondrial Metabolism         0.167         0.208         0.178         0.249           Myelination         0.433         0.583         0.425         0.58           Oxidative Stress         0.0586         0.256         0.265         0.273	0.0198 0.112 0.0594
Lipid Metabolism 0.0964 0.203 0.145 0.18  Metal Binding and Homeostasis -0.0226 0.0781 0.145 0.0719  Mitochondrial Metabolism 0.167 0.208 0.178 0.249  Myelination 0.433 0.583 0.425 0.58  Oxidative Stress 0.0586 0.256 0.265 0.273	0.112
Metal Binding and Homeostasis         -0.0226         0.0781         0.145         0.0719           Mitochondrial Metabolism         0.167         0.208         0.178         0.249           Myelination         0.433         0.583         0.425         0.58           Oxidative Stress         0.0586         0.256         0.265         0.273	0.0594
Mitochondrial Metabolism         0.167         0.208         0.178         0.249           Myelination         0.433         0.583         0.425         0.58           Oxidative Stress         0.0586         0.256         0.265         0.273	
Myelination         0.433         0.583         0.425         0.58           Oxidative Stress         0.0586         0.256         0.265         0.273	0.178
Oxidative Stress 0.0586 0.256 0.265 0.273	
	0.491
Proteostasis 0.0648 0.17 0.149 0.136	0.174
	0.148
RNA Spliceosome	
Structural Stabilization 0.0133 0.233 0.17 0.068	0.121
Synapse 0.089 <b>0.326 0.295</b> 0.159	0.196
Tau Homeostasis	
Vasculature 0.0799 <b>0.348 0.378</b> 0.129	0.199
WT/WT WT/FC FC/FC WT/VS	VS/VS

### Coronavirus disease - COVID-19

Apoptosis	-0.103	-0.0425	-0.0317	-0.0431	0.0053
APP Metabolism					
Autophagy	-0.0246	0.0951	0.099	-0.0454	0.17
Cell Cycle	-0.0967	-0.0405	-0.00897	-0.0359	-0.0829
DNA Repair	-0.0483	0.0362	0.0465	-0.0466	-0.0333
Endolysosome	-0.11	0.0264	0.0158	-0.0775	0.137
Epigenetic	-0.0676	0.1	0.092	-0.0399	0.0497
Immune Response	-0.0811	-0.124	-0.0852	-0.0157	-0.0319
Lipid Metabolism	-0.0779	0.00528	0.0229	0.0149	0.0389
Metal Binding and Homeostasis	-0.168	-0.0884	0.0494	-0.177	-0.0366
Mitochondrial Metabolism	-0.125	-0.0967	0.0201	-0.0997	-0.0547
Myelination					
Oxidative Stress	0.117	0.431	0.371	0.13	0.339
Proteostasis	-0.0952	-0.397	-0.436	0.0411	-0.25
RNA Spliceosome					
Structural Stabilization	-0.134	-0.484	-0.509	0.0215	-0.296
Synapse	-0.111	-0.406	-0.379	0.0268	-0.215
Tau Homeostasis					
Vasculature	-0.0987	-0.028	0.0805	-0.0808	0.0315
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### Influenza A

Apoptosis	-0.00633	0.0795	0.046	0.0296	0.0705
APP Metabolism					
Autophagy	0.116	0.305	0.22	0.162	0.109
Cell Cycle	0.164	0.231	0.341	0.135	0.232
DNA Repair	0.0976	0.00512	0.161	0.0674	0.114
Endolysosome	0.0567	0.202	0.216	0.0745	0.287
Epigenetic	-0.075	0.0102	0.0833	-0.124	0.0147
Immune Response	0.0355	0.0822	0.122	0.0574	0.0933
Lipid Metabolism	0.0523	0.0893	0.0454	0.0976	0.0422
Metal Binding and Homeostasis	0.0152	0.0704	0.265	-0.146	0.179
Mitochondrial Metabolism	0.152	0.138	0.125	0.168	0.122
Myelination					
Oxidative Stress	0.144	0.37	0.368	0.118	0.27
Proteostasis	0.141	0.24	0.211	0.116	0.22
RNA Spliceosome					
Structural Stabilization	0.106	0.199	0.205	0.071	0.161
Synapse	0.217	0.364	0.324	0.199	0.249
Tau Homeostasis					
Vasculature	0.184	0.349	0.381	0.101	0.211
-	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

			Measles		
Apoptosis	-0.00788	0.106	0.0545	0.125	0.12
APP Metabolism					
Autophagy	-0.0439	0.17	0.103	0.0844	0.165
Cell Cycle	0.0743	0.1	0.0943	0.258	0.1
DNA Repair	0.06	0.0167	0.0585	0.246	0.0758
Endolysosome	-0.0481	0.0374	0.0808	0.0532	0.139
Epigenetic	-0.0524	0.0874	0.066	0.0677	0.0445
Immune Response	-0.0184	0.0345	0.00437	0.104	0.0609
Lipid Metabolism	0.0401	0.13	0.0872	0.202	0.159
Metal Binding and Homeostasis	-0.0973	-0.0163	0.1	-0.0496	0.0551
Mitochondrial Metabolism	0.104	0.15	0.0835	0.236	0.184
Myelination					
Oxidative Stress	0.211	0.547	0.417	0.363	0.355
Proteostasis	0.0124	0.125	0.0766	0.142	0.126
RNA Spliceosome					
Structural Stabilization	-0.0423	0.0646	-0.0024	0.109	0.0756
Synapse	0.0106	0.147	0.0966	0.192	0.136
Tau Homeostasis					
Vasculature	0.0585	0.251	0.142	0.0916	0.0515
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS
	VV 17 VV 1	VV 1/1 G	1 0/1 0	VV 17 V O	V 0/ V

## Herpes simplex virus 1 infection

APP Metabolism  Autophagy 0.00769 0.0396 0.0287 0.0783  Cell Cycle 0.0806 0.074 0.0695 0.224  DNA Repair 0.112 0.0549 0.109 0.299  Endolysosome -0.019 -0.0276 0.0247 0.0251  Epigenetic 0.0152 0.163 0.0749 -0.0156  Immune Response -0.016 -0.0123 -0.0286 0.0444  Lipid Metabolism 0.00848 0.0217 -0.00433 0.0726  Metal Binding and Homeostasis 0.0168 0.139 0.107 -0.057  Mitochondrial Metabolism 0.0981 0.203 -0.0398 0.309  Oxidative Stress 0.189 0.33 0.293 0.356  Proteostasis 0.0208 -0.00282 -0.00418 0.0839  RNA Spliceosome -0.0411 0.0643 -0.221 -0.00555	0.0868 0.0117 0.139 0.139 0.0888 0.0289 0.0419 0.0339 0.154
Autophagy	0.117 0.139 0.139 0.0888 0.0289 0.0419 0.0339
Cell Cycle       0.0806       0.074       0.0695       0.224         DNA Repair       0.112       0.0549       0.109       0.299         Endolysosome       -0.019       -0.0276       0.0247       0.0251         Epigenetic       0.0152       0.163       0.0749       -0.0156         Immune Response       -0.016       -0.0123       -0.0286       0.0444         Lipid Metabolism       0.00848       0.0217       -0.00433       0.0726         Metal Binding and Homeostasis       0.0168       0.139       0.107       -0.057         Mitochondrial Metabolism       0.157       0.088       0.0771       0.296         Myelination       0.0981       0.203       -0.0398       0.309         Oxidative Stress       0.189       0.33       0.293       0.356         Proteostasis       0.0208       -0.00282       -0.00418       0.0839         RNA Spliceosome       -0.0411       0.0643       -0.021       -0.00555	0.117 0.139 0.139 0.0888 0.0289 0.0419 0.0339
DNA Repair  Endolysosome  -0.019  -0.0276  0.0247  0.0251  Epigenetic  0.0152  0.163  0.0749  -0.0156  Immune Response  -0.016  -0.0123  -0.0286  0.0444  Lipid Metabolism  0.00848  0.0217  -0.00433  0.0726  Metal Binding and Homeostasis  0.0168  0.139  0.107  -0.057  Mitochondrial Metabolism  Myelination  0.0981  0.0981  0.203  -0.0398  0.309  Oxidative Stress  0.189  0.33  0.293  0.356  Proteostasis  0.0208  -0.00282  -0.00418  0.0839  RNA Spliceosome	0.139 0.139 0.0888 0.0289 0.0419 0.0339
Endolysosome	0.139 0.0888 0.0289 0.0419 0.0339
Epigenetic 0.0152 0.163 0.0749 -0.0156  Immune Response -0.016 -0.0123 -0.0286 0.0444  Lipid Metabolism 0.00848 0.0217 -0.00433 0.0726  Metal Binding and Homeostasis 0.0168 0.139 0.107 -0.057  Mitochondrial Metabolism 0.157 0.088 0.0771 0.296  Myelination 0.0981 0.203 -0.0398 0.309  Oxidative Stress 0.189 0.33 0.293 0.356  Proteostasis 0.0208 -0.00282 -0.00418 0.0839  RNA Spliceosome -0.0411 0.0643 -0.221 -0.00555	0.0888 0.0289 0.0419 0.0339
Immune Response         -0.016         -0.0123         -0.0286         0.0444           Lipid Metabolism         0.00848         0.0217         -0.00433         0.0726           Metal Binding and Homeostasis         0.0168         0.139         0.107         -0.057           Mitochondrial Metabolism         0.157         0.088         0.0771         0.296           Myelination         0.0981         0.203         -0.0398         0.309           Oxidative Stress         0.189         0.33         0.293         0.356           Proteostasis         0.0208         -0.00282         -0.00418         0.0839           RNA Spliceosome         -0.0411         0.0643         -0.221         -0.00555	0.0289 0.0419 0.0339 0.154
Lipid Metabolism 0.00848 0.0217 -0.00433 0.0726  Metal Binding and Homeostasis 0.0168 0.139 0.107 -0.057  Mitochondrial Metabolism 0.157 0.088 0.0771 0.296  Myelination 0.0981 0.203 -0.0398 0.309  Oxidative Stress 0.189 0.33 0.293 0.356  Proteostasis 0.0208 -0.00282 -0.00418 0.0839  RNA Spliceosome -0.0411 0.0643 -0.221 -0.00555	0.0419
Metal Binding and Homeostasis       0.0168       0.139       0.107       -0.057         Mitochondrial Metabolism       0.157       0.088       0.0771       0.296         Myelination       0.0981       0.203       -0.0398       0.309         Oxidative Stress       0.189       0.33       0.293       0.356         Proteostasis       0.0208       -0.00282       -0.00418       0.0839         RNA Spliceosome       -0.0411       0.0643       -0.221       -0.00555	0.0339
Mitochondrial Metabolism       0.157       0.088       0.0771       0.296         Myelination       0.0981       0.203       -0.0398       0.309         Oxidative Stress       0.189       0.33       0.293       0.356         Proteostasis       0.0208       -0.00282       -0.00418       0.0839         RNA Spliceosome       -0.0411       0.0643       -0.221       -0.00555	0.154
Myelination         0.0981         0.203         -0.0398         0.309           Oxidative Stress         0.189         0.33         0.293         0.356           Proteostasis         0.0208         -0.00282         -0.00418         0.0839           RNA Spliceosome         -0.0411         0.0643         -0.221         -0.00555	
Oxidative Stress         0.189         0.33         0.293         0.356           Proteostasis         0.0208         -0.00282         -0.00418         0.0839           RNA Spliceosome         -0.0411         0.0643         -0.221         -0.00555	) 079
Proteostasis         0.0208         -0.00282         -0.00418         0.0839           RNA Spliceosome         -0.0411         0.0643         -0.221         -0.00555	2.07.0
RNA Spliceosome -0.0411 0.0643 -0.221 -0.00555	0.368
	0.0483
	0.0853
Structural Stabilization -0.0666 0.0317 -0.0222 0.0141	0.0629
Synapse 0.0989 0.0858 0.131 0.166	0.125
Tau Homeostasis	
Vasculature 0.112 0.214 0.203 0.15	0.16
WT/WT WT/FC FC/FC WT/VS V	S/VS

## Human cytomegalovirus infection

Apoptosis	-0.0366	0.0807	0.105	0.0582	0.138
APP Metabolism	-0.192	0.173	0.183	-0.105	-0.0465
Autophagy	0.0257	0.128	0.15	0.0568	0.0992
Cell Cycle	0.0927	0.22	0.262	0.14	0.241
DNA Repair	0.0418	0.0658	0.199	0.166	0.0922
Endolysosome	0.133	0.224	0.264	0.164	0.232
Epigenetic	0.015	0.124	0.136	0.101	0.159
Immune Response	0.0103	0.12	0.0975	0.0539	0.0948
Lipid Metabolism	-0.079	0.125	0.0927	-0.0332	0.0954
Metal Binding and Homeostasis	0.0903	0.262	0.253	0.0818	0.183
Mitochondrial Metabolism	0.0844	0.195	0.154	0.141	0.122
Myelination	0.39	0.484	0.404	0.383	0.367
Oxidative Stress	0.183	0.383	0.33	0.356	0.302
Proteostasis	0.122	0.162	0.173	0.178	0.172
RNA Spliceosome					
Structural Stabilization	0.0542	0.192	0.212	0.0701	0.215
Synapse	0.0767	0.21	0.209	0.102	0.165
Tau Homeostasis					
Vasculature	0.0798	0.232	0.294	0.111	0.236
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### Kaposi sarcoma-associated herpesvirus infection 0.103

Apoptosis	-0.028	0.0829	0.0637	0.0373	0.103
APP Metabolism					
Autophagy	-0.00609	0.223	0.208	-0.004	0.0848
Cell Cycle	0.11	0.212	0.248	0.186	0.289
DNA Repair	-0.0181	-0.0372	0.104	0.141	0.0342
Endolysosome	0.112	0.243	0.248	0.122	0.212
Epigenetic	0.00153	0.163	0.117	0.0466	0.175
Immune Response	0.00833	0.0966	0.0822	0.0598	0.127
Lipid Metabolism	0.0192	0.127	0.0893	0.088	0.157
Metal Binding and Homeostasis	0.103	0.263	0.225	0.176	0.235
Mitochondrial Metabolism	0.0525	0.13	0.0569	0.13	0.0635
Myelination	0.355	0.553	0.415	0.357	0.415
Oxidative Stress	0.212	0.464	0.388	0.312	0.389
Proteostasis	0.107	0.218	0.195	0.19	0.169
RNA Spliceosome					
Structural Stabilization	0.0375	0.135	0.123	0.0844	0.256
Synapse	0.0822	0.262	0.214	0.087	0.211
Tau Homeostasis					
Vasculature	0.0833	0.286	0.272	0.0952	0.304
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Epstein	–Barr virus	infection

Apoptosis  APP Metabolism  Autophagy	-0.0419 -0.0874	0.102	0.0203	0.0784	0.0622
	-0.0874				
Autophagy		0.0975	0.0953	0.202	-0.135
	-0.0317	0.194	0.0858	0.0307	0.169
Cell Cycle	0.0657	0.207	0.136	0.184	0.137
DNA Repair	-0.0952	-0.0227	-0.0652	0.0788	-0.0668
Endolysosome	-0.0698	0.0784	0.034	-0.0152	0.11
Epigenetic	-0.0554	0.0359	-0.0506	0.0547	-0.0134
Immune Response	-0.0466	0.0556	-0.00198	0.033	0.0287
Lipid Metabolism	-0.04	0.081	0.00119	0.0545	0.033
Metal Binding and Homeostasis	-0.0779	0.00385	-0.00891	0.00114	0.0038
Mitochondrial Metabolism	-0.0489	0.0971	-0.0172	0.135	0.051
Myelination	0.144	0.222	0.038	0.537	0.28
Oxidative Stress	0.0824	0.342	0.233	0.19	0.198
Proteostasis	-0.0135	0.0704	-0.0542	0.0891	-0.0462
RNA Spliceosome					
Structural Stabilization	-0.0934	0.00643	-0.0552	0.0186	0.0241
Synapse	0.0169	0.216	0.0823	0.106	0.0865
Tau Homeostasis					
Vasculature	0.036	0.208	0.163	0.074	0.0923
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

# Human papillomavirus infection

Apoptosis	0.00789	0.159	0.159	0.106	0.164
APP Metabolism	-0.0752	0.236	0.157	0.00873	-0.0797
Autophagy	0.0689	0.205	0.228	0.0844	0.072
Cell Cycle	0.141	0.209	0.226	0.204	0.156
DNA Repair	0.0641	0.122	0.299	0.0889	0.172
Endolysosome	0.158	0.2	0.204	0.195	0.143
Epigenetic	0.00668	0.0638	0.104	0.0985	0.105
Immune Response	0.0323	0.0979	0.0975	0.109	0.109
Lipid Metabolism	-0.0145	0.0906	0.122	0.0529	0.114
Metal Binding and Homeostasis	-0.0319	0.0479	0.0843	0.0699	0.033
Mitochondrial Metabolism	0.125	0.174	0.163	0.175	0.0714
Myelination	0.102	0.132	0.123	0.244	0.167
Oxidative Stress	0.0767	0.25	0.271	0.237	0.143
Proteostasis	0.122	0.12	0.171	0.18	0.207
RNA Spliceosome					
Structural Stabilization	0.0497	0.0695	0.111	0.138	0.112
Synapse	0.111	0.203	0.212	0.128	0.159
Tau Homeostasis					
Vasculature	0.00723	0.117	0.184	0.115	0.171
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS
	VV 1/VV 1	WI/FC	FC/FC	W1/V3	V5/V5

### Salmonella infection

		Sain	monella inted	ction	
Apoptosis	0.037	0.146	0.0891	0.0463	0.144
APP Metabolism					
Autophagy	-0.00176	0.218	0.184	-0.0285	0.158
Cell Cycle	0.137	0.312	0.293	0.187	0.186
DNA Repair	-0.00346	0.134	0.162	-0.00977	0.136
Endolysosome	0.0775	0.199	0.158	0.0698	0.149
Epigenetic	0.0173	0.136	0.0686	0.0278	0.129
Immune Response	0.1	0.193	0.11	0.108	0.175
Lipid Metabolism	0.0327	0.163	0.0845	0.0845	0.164
Metal Binding and Homeostasis	0.0612	0.132	0.0993	0.143	0.114
Mitochondrial Metabolism	0.113	0.285	0.106	0.176	0.24
Myelination	0.239	0.223	0.218	0.32	0.37
Oxidative Stress	0.222	0.534	0.367	0.268	0.349
Proteostasis	0.12	0.281	0.214	0.155	0.222
RNA Spliceosome					
Structural Stabilization	0.0687	0.105	0.0739	0.0991	0.0755
Synapse	0.126	0.252	0.225	0.115	0.202
Tau Homeostasis					
Vasculature	0.0935	0.198	0.108	0.073	0.155
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

#### Yersinia infection

				011	
Apoptosis	-0.0495	0.108	0.0663	-0.0616	0.0243
APP Metabolism					
Autophagy	0.109	0.256	0.206	0.0635	0.224
Cell Cycle	0.031	0.33	0.247	-0.0309	0.203
DNA Repair	-0.0589	0.0528	0.0147	-0.0683	0.0455
Endolysosome	0.0918	0.144	0.117	0.0952	0.179
Epigenetic	0.037	0.235	0.136	0.0253	0.0655
Immune Response	0.0338	0.125	0.1	0.0361	0.0767
Lipid Metabolism	-0.00858	0.138	0.0727	0.0484	0.0559
Metal Binding and Homeostasis	-0.0752	0.0122	-0.0335	-0.0848	0.0369
Mitochondrial Metabolism	0.104	0.168	0.164	0.111	0.183
Myelination					
Oxidative Stress	0.263	0.594	0.432	0.28	0.399
Proteostasis	0.14	0.285	0.241	0.142	0.257
RNA Spliceosome					
Structural Stabilization	0.0117	0.0709	0.0616	-0.00832	0.0755
Synapse	0.0824	0.181	0.173	0.0481	0.174
Tau Homeostasis					
Vasculature	0.0451	0.103	0.135	0.0191	0.034
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Pertussis						
Apoptosis	0.106	0.144	0.123	0.183	0.114		
APP Metabolism							
Autophagy	-0.0405	0.0537	0.156	-0.00574	0.143		
Cell Cycle	0.196	0.383	0.405	0.146	0.21		
DNA Repair							
Endolysosome	0.0239	0.102	0.122	0.0389	0.149		
Epigenetic	0.0978	0.266	0.228	0.108	0.0855		
Immune Response	0.0655	0.0517	0.0794	0.103	0.114		
Lipid Metabolism	0.0367	0.0489	0.0799	0.119	0.0967		
Metal Binding and Homeostasis	0.0309	0.188	0.252	0.0255	0.229		
Mitochondrial Metabolism	-0.0927	0.0764	0.0312	-0.0774	0.00618		
Myelination							
Oxidative Stress	0.185	0.432	0.546	0.224	0.358		
Proteostasis	0.178	0.286	0.243	0.186	0.171		
RNA Spliceosome							
Structural Stabilization	0.0955	0.139	0.212	0.123	0.268		
Synapse	0.15	0.19	0.261	0.129	0.261		
Tau Homeostasis							
Vasculature	0.116	0.14	0.2	0.0969	0.156		
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS		

	Legionellosis						
Apoptosis	-0.0226	0.101	0.0396	0.0679	0.07		
APP Metabolism							
Autophagy	0.0251	0.243	0.215	0.0643	0.0888		
Cell Cycle							
DNA Repair							
Endolysosome	-0.111	0.115	0.011	-0.085	0.04		
Epigenetic	-0.0486	-0.0615	-0.183	0.012	-0.0594		
Immune Response	-0.0433	0.133	-0.0229	0.0526	0.0525		
Lipid Metabolism	-0.0579	0.0645	-0.0272	0.0528	0.0374		
Metal Binding and Homeostasis							
Mitochondrial Metabolism	-0.0213	0.247	-0.0147	-0.0499	0.0488		
Myelination							
Oxidative Stress							
Proteostasis	0.0592	0.215	0.0507	0.148	0.0846		
RNA Spliceosome							
Structural Stabilization	-0.147	-0.136	-0.179	0.000644	-0.0142		
Synapse	0.0822	0.299	0.318	0.126	0.124		
Tau Homeostasis							
Vasculature	-0.0104	0.00371	-0.0209	0.044	-0.132		
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS		

Staphylococcus aureus infection	

745 1107	-0.0549 -0.0722 -0.178	0.252 0.127 0.0583	-0.0775 0.0635 -0.0354	0.22 0.176 0.161
745	-0.0722	0.127	0.0635	0.176
745	-0.0722	0.127	0.0635	0.176
745	-0.0722	0.127	0.0635	0.176
745	-0.0722	0.127	0.0635	0.176
745	-0.0722	0.127	0.0635	0.176
107	-0.178	0.0583	-0.0354	0.161
15	0.00337	0.04	0.0238	-0.00674
504	-0.115	-0.0119	-0.0236	0.126
96	-0.134	0.128	0.241	0.379
71	-0.0654	0.113	0.0305	0.218
/WT	WT/FC	FC/FC	WT/VS	VS/VS
	604 996	-0.115 -0.134 71 -0.0654	71 -0.0654 -0.113	71

			Tuberculosis	3
Anontosis	0.0000	0.000	0.4	

Apoptosis	0.0992	0.089	0.1	0.15	0.195
APP Metabolism	0.0104	0.162	0.358	0.149	0.298
Autophagy	0.225	0.233	0.348	0.254	0.373
Cell Cycle	0.164	0.255	0.274	0.162	0.297
DNA Repair	0.0771	0.122	0.0932	0.0934	0.113
Endolysosome	0.201	0.222	0.273	0.205	0.329
Epigenetic	0.0936	0.185	0.152	0.0657	0.225
Immune Response	0.0879	0.108	0.156	0.0981	0.208
Lipid Metabolism	0.102	0.0942	0.148	0.123	0.203
Metal Binding and Homeostasis	0.0149	0.0993	0.212	-0.0284	0.203
Mitochondrial Metabolism	0.148	0.206	0.173	0.189	0.24
Myelination	0.328	0.533	0.389	0.352	0.586
Oxidative Stress	0.151	0.285	0.331	0.171	0.363
Proteostasis	0.152	0.199	0.211	0.175	0.221
RNA Spliceosome					
Structural Stabilization	0.135	0.144	0.209	0.139	0.244
Synapse	0.225	0.381	0.382	0.165	0.344
Tau Homeostasis					
Vasculature	0.139	0.228	0.227	0.119	0.232
'	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

## Bacterial invasion of epithelial cells

Apoptosis	-0.0363	0.0641	0.101	0.0164	0.0585
APP Metabolism					
Autophagy	0.0354	0.206	0.232	0.0599	0.154
Cell Cycle	0.0894	0.295	0.282	0.0324	0.389
DNA Repair					
Endolysosome	0.019	0.254	0.235	-0.0186	0.265
Epigenetic	0.232	0.471	0.399	0.153	0.475
Immune Response	0.0697	0.225	0.203	0.0856	0.23
Lipid Metabolism	-0.0443	0.254	0.201	-0.0575	0.25
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.14	0.272	0.249	0.177	0.387
RNA Spliceosome					
Structural Stabilization	-2.29e-05	0.12	0.109	-0.0163	0.101
Synapse	0.00309	0.118	0.138	-0.0386	0.135
Tau Homeostasis					
Vasculature	0.0296	0.221	0.131	0.0232	0.185
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Amoebiasis	

	Amoebiasis					
Apoptosis	-0.0774	0.0458	0.0778	-0.0274	0.0575	
APP Metabolism						
Autophagy	0.0592	0.211	0.272	0.0747	0.111	
Cell Cycle						
DNA Repair						
Endolysosome	0.237	0.349	0.348	0.245	0.333	
Epigenetic	0.0945	0.21	0.176	0.129	0.111	
Immune Response	-0.00111	0.0769	0.0828	0.0425	0.0778	
Lipid Metabolism	-0.0406	0.128	0.15	-0.0269	0.0943	
Metal Binding and Homeostasis	-0.0875	-0.0273	0.108	-0.0369	0.0516	
Mitochondrial Metabolism	-0.0297	0.112	0.0902	-0.0568	-0.0792	
Myelination						
Oxidative Stress	-0.171	-0.102	-0.0131	0.1	0.0382	
Proteostasis	0.0206	0.0778	0.158	0.175	0.0963	
RNA Spliceosome						
Structural Stabilization	-0.0661	-0.107	0.05	0.0636	0.0676	
Synapse	0.0573	0.0591	0.181	0.134	0.141	
Tau Homeostasis						
Vasculature	-0.0923	-0.0994	0.0376	0.0416	0.0803	
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS	

			Malaria		
Apoptosis	0.0215	0.0722	0.0974	0.0517	0.187
APP Metabolism					
Autophagy	0.0257	0.114	0.269	0.0547	0.339
Cell Cycle					
DNA Repair					
Endolysosome	-0.0656	-0.0311	0.0692	0.00256	0.055
Epigenetic	0.0712	0.137	0.0756	0.0779	0.208
Immune Response	-0.0516	-0.0215	0.0782	0.00503	0.135
Lipid Metabolism	-0.0711	-0.0706	0.0583	-0.0502	0.0805
Metal Binding and Homeostasis	-0.117	-0.0922	0.235	-0.135	0.121
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	-0.0359	0.0427	0.102	-0.0578	0.258
RNA Spliceosome					
Structural Stabilization	-0.0631	-0.11	0.0717	-0.0443	0.0846
Synapse	0.0436	0.144	0.299	0.00446	0.325
Tau Homeostasis					
Vasculature	-0.0283	-0.0527	0.0968	-0.0375	0.0644
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Toxoplasmos				
Apoptosis	0.0112	0.202	0.088		

Apoptosis	0.0112	0.202	0.088	0.0547	0.152
APP Metabolism					
Autophagy	0.0674	0.234	0.251	0.123	0.267
Cell Cycle	0.0153	0.261	0.208	0.072	0.187
DNA Repair	0.0247	0.209	0.191	0.0151	0.16
Endolysosome	0.0625	0.245	0.188	0.00412	0.212
Epigenetic	-0.0509	0.225	0.0852	-0.0553	0.184
Immune Response	-0.0229	0.104	0.0715	0.00978	0.141
Lipid Metabolism	0.0136	0.143	0.0592	0.0279	0.147
Metal Binding and Homeostasis	-0.105	0.242	0.165	-0.0882	0.22
Mitochondrial Metabolism	0.13	0.226	0.215	0.153	0.198
Myelination	0.108	0.278	0.127	0.34	0.432
Oxidative Stress	0.113	0.385	0.345	0.191	0.294
Proteostasis	0.081	0.212	0.212	0.0749	0.176
RNA Spliceosome					
Structural Stabilization	-0.0628	0.063	0.0342	0.0145	0.183
Synapse	0.0378	0.229	0.249	0.0658	0.223
Tau Homeostasis					
Vasculature	-0.0534	0.108	0.0743	0.00576	0.0822
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

# Leishmaniasis

APP Metabolism Autophagy Cell Cycle DNA Repair Endolysosome Epigenetic Immune Response	-0.122 -0.0284 0.0529 0.00724 -0.0107 -0.0204	0.0149 -0.0753 0.157 0.0647 0.193	0.211 0.0267 0.184 0.118	-0.0252 -0.022 0.0329 -0.0356 -0.00259	0.117 0.116 0.0751
Cell Cycle DNA Repair Endolysosome Epigenetic	0.0529 0.00724 -0.0107	0.157	0.184	0.0329 -0.0356	0.0751
DNA Repair Endolysosome Epigenetic	0.00724	0.0647	0.118	-0.0356	0.0783
Endolysosome Epigenetic	-0.0107				
Epigenetic	-0.0107				
		0.193	0.131	0.00250	
Immune Response	-0.0204		0	-0.00259	0.0616
		0.0214	0.0624	-0.0173	0.094
Lipid Metabolism	-0.0323	0.0684	0.137	-0.0513	0.0678
Metal Binding and Homeostasis	-0.16	0.0671	0.148	-0.177	0.115
Mitochondrial Metabolism	0.0819	-0.085	-0.113	0.00943	0.0407
Myelination					
Oxidative Stress	0.104	0.175	0.33	0.0874	0.272
Proteostasis	0.159	0.342	0.365	0.103	0.216
RNA Spliceosome					
Structural Stabilization	-0.0818	0.0614	0.131	-0.103	0.107
Synapse	-0.0274	0.146	0.224	-0.0987	0.154
Tau Homeostasis					
Vasculature	0.000274	0.143	0.159	0.0131	0.0463
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Chagas disease

Apoptosis	0.00409	0.184	0.102	0.0836	0.171
APP Metabolism					
Autophagy	0.187	0.351	0.333	0.192	0.312
Cell Cycle	0.248	0.5	0.407	0.221	0.331
DNA Repair					
Endolysosome	0.1	0.169	0.176	0.162	0.215
Epigenetic	0.0764	0.31	0.223	0.109	0.215
Immune Response	0.0205	0.133	0.11	0.086	0.165
Lipid Metabolism	0.0105	0.209	0.123	0.0862	0.141
Metal Binding and Homeostasis	-0.0131	0.23	0.178	0.0806	0.188
Mitochondrial Metabolism	0.0338	0.296	0.195	0.0635	0.09
Myelination					
Oxidative Stress	0.204	0.525	0.454	0.284	0.362
Proteostasis	0.12	0.24	0.213	0.157	0.206
RNA Spliceosome					
Structural Stabilization	0.0807	0.222	0.181	0.203	0.284
Synapse	0.147	0.303	0.295	0.202	0.276
Tau Homeostasis					
Vasculature	0.114	0.228	0.187	0.234	0.194
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

			• •		
Apoptosis	-0.0655	-0.155	-0.0716	-0.068	
APP Metabolism					
Autophagy					

-0.112

-0.0927

-0.14

-0.0497

-0.00297

-0.0949

-0.0162

-0.097

WT/FC

Cell Cycle **DNA Repair** 

Metal Binding and Homeostasis

Mitochondrial Metabolism

Endolysosome

**Epigenetic** 

Immune Response

Myelination

**Proteostasis** 

Synapse

Vasculature

Oxidative Stress

**RNA Spliceosome** 

Tau Homeostasis

Structural Stabilization

Lipid Metabolism

-0.0736-0.152 -0.0278

0.0897

-0.0986

-0.0742

-0.132

WT/WT

-0.0741

0.0132 -0.07320.189 0.191

0.0777

0.13

0.105

FC/FC

African trypanosomiasis

0.0297

0.0109

0.11

0.0284

-0.0531

0.00334

0.19

-0.0488

0.0205

-0.0309

VS/VS

0.0751

-0.0904

-0.0694

-0.215

0.14

-0.0725

-0.0243

-0.0606

WT/VS

			Asthma		
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response	0.00909	0.0452	0.0679	-0.0428	0.0169
Lipid Metabolism					
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Systemic	lupus eryth	ematosus	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic	0.267	0.281	0.21	0.302	0.275
Immune Resnonse	0.143	0.0367	0.119	0.0451	0.218

1 3					
Immune Response	0.143	0.0367	0.119	0.0451	0.218
Lipid Metabolism	0.0355	-0.212	0.00144	-0.031	0.0269
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.0243	0.0737	0.159	-0.116	0.0357
RNA Spliceosome					

Lipid Metabolism	0.0355	-0.212	0.00144	-0.031	0.0269
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.0243	0.0737	0.159	-0.116	0.0357
RNA Spliceosome					
Structural Stabilization					
Synapse	0.28	-0.053	0.256	0.143	0.279
Tau Homeostasis					
Vasculature					

Oxidative Stress					
Proteostasis	0.0243	0.0737	0.159	-0.116	0.0357
RNA Spliceosome					
Structural Stabilization					
Synapse	0.28	-0.053	0.256	0.143	0.279
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Rhe	umatoid artl	nritis
3	0.0938	0.0153	0.185	0.14

Apoptosis	0.0938	0.0153	0.185	0.145	0.233
APP Metabolism					
Autophagy	0.108	0.172	0.177	0.155	0.0454
Cell Cycle					
DNA Repair					
Endolysosome	0.0925	0.141	0.142	0.13	0.0535
Epigenetic	0.21	0.271	0.283	0.371	0.223
Immune Response	0.129	0.0956	0.172	0.197	0.244
Lipid Metabolism	-0.0102	0.0328	0.156	-0.0308	0.179
Metal Binding and Homeostasis	0.0228	0.181	0.218	0.075	0.0981
Mitochondrial Metabolism	0.145	0.164	0.164	0.172	-0.000272
Myelination					
Oxidative Stress					
Proteostasis	0.396	0.589	0.519	0.464	0.33
RNA Spliceosome					
Structural Stabilization	0.0193	0.0213	0.142	0.103	0.205
Synapse	0.0884	0.199	0.208	0.0885	0.101
Tau Homeostasis					
Vasculature	0.0399	0.0657	0.217	0.124	0.262
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Autoimm	nune thyroid	disease	
Apoptosis			•		
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response	0.0538	-0.00495	0.142	0.0392	0.185
Lipid Metabolism	-0.0383	-0.0865	0.0478	0.0106	-0.0208
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Apoptosis	-0.0204	-0.0259	-0.0378	0.0491	-0.0751
APP Metabolism					
Autophagy					
Cell Cycle					

0.0556

0.0266

0.0301

-0.107

-0.125

0.19

-0.212

0.14

0.0189

WT/FC

Inflammatory bowel disease

0.097

0.0142

0.0199

-0.13

-0.0883

0.304

-0.09

0.151

0.066

FC/FC

0.037

0.0393

0.0547

-0.029

-0.202

0.149

-0.0114

0.122

0.116

WT/VS

0.0839

-0.095

-0.025

-0.21

-0.0767

0.14

-0.122

0.0179

-0.0242

VS/VS

Cell Cycle

DNA Repair

Endolysosome
-0.0534

-0.0576

-0.0315

-0.0978

-0.221

0.0873

-0.097

0.043

0.0397

WT/WT

**Epigenetic** 

Myelination

**Proteostasis** 

Synapse

Vasculature

Immune Response

Metal Binding and Homeostasis

Mitochondrial Metabolism

Lipid Metabolism

Oxidative Stress

**RNA Spliceosome** 

Tau Homeostasis

Structural Stabilization

		All	ograft rejecti	on	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response	0.0283	0.0169	0.0968	0.0723	0.168
Lipid Metabolism	-0.0185	-0.11	-0.0379	0.0731	0.0331
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

		Graft-v	ersus-host	disease	
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response	0.0256	0.0128	0.276	0.125	0.212
Lipid Metabolism	-0.00362	-0.106	0.175	0.109	0.0834
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Primary immunodeficiency				
Apoptosis	-0.0263	-0.0107	0.172	-0.00472	0.191
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response	0.0296	0.0635	0.114	0.0842	0.179
Lipid Metabolism	0.0134	0.0438	0.089	0.184	0.189
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	0.0325	0.0565	0.17	-0.0806	0.0745
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

### Alzheimer disease

Apoptosis	0.00796	0.177	0.0793	0.0784	0.0363
APP Metabolism	0.0891	0.291	0.391	0.0722	0.143
Autophagy	0.0922	0.244	0.201	0.129	0.0844
Cell Cycle	0.2	0.296	0.322	0.223	0.24
DNA Repair	0.139	0.139	0.239	0.104	0.131
Endolysosome	0.116	0.177	0.163	0.145	0.0677
Epigenetic	0.083	0.232	0.141	0.121	0.154
Immune Response	0.108	0.215	0.169	0.157	0.135
Lipid Metabolism	0.0158	0.141	0.106	0.0956	0.0278
Metal Binding and Homeostasis	0.0732	0.114	0.0449	0.112	0.00314
Mitochondrial Metabolism	-0.113	-0.232	-0.402	-0.0209	-0.327
Myelination	0.34	0.499	0.352	0.39	0.305
Oxidative Stress	-0.00914	0.0924	-0.0433	0.0844	0.00923
Proteostasis	0.103	0.122	0.032	0.172	-0.00779
RNA Spliceosome					
Structural Stabilization	0.109	0.157	0.169	0.183	0.113
Synapse	0.137	0.226	0.237	0.153	0.16
Tau Homeostasis					
Vasculature	0.0247	0.244	0.224	0.0647	0.139
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

# Parkinson disease

APP Metabolism Autophagy Cell Cycle DNA Repair Endolysosome Epigenetic	-0.0644  0.263  -0.0912  0.121  -0.0175	-0.0752 0.229 -0.313 0.0485	-0.0498 0.241 -0.218 0.0858	0.0309 0.382 0.134 0.149	-0.125 0.178 -0.366 -0.082
Cell Cycle DNA Repair Endolysosome	0.263 -0.0912 0.121	0.229	0.241	0.382	0.178 -0.366
DNA Repair Endolysosome	-0.0912 0.121	-0.313	-0.218	0.134	-0.366
Endolysosome	0.121				
·		0.0485	0.0858	0.149	-0.082
Epigenetic	-0.0175				0.002
		-0.0205	-0.0884	0.103	-0.0649
Immune Response	-0.00896	-0.0266	-0.017	0.171	-0.059
Lipid Metabolism	-0.062	-0.108	-0.121	0.0696	-0.176
letal Binding and Homeostasis	0.0721	-0.0137	-0.0642	0.161	-0.0897
Mitochondrial Metabolism	-0.205	-0.389	-0.53	-0.0611	-0.452
Myelination					
Oxidative Stress	-0.103	-0.159	-0.287	0.0196	-0.195
Proteostasis	0.00525	-0.0815	-0.157	0.137	-0.232
RNA Spliceosome					
Structural Stabilization	0.106	-0.0316	0.0414	0.244	-0.0321
Synapse	0.0909	0.0146	0.0345	0.169	0.0357
Tau Homeostasis					
Vasculature	-0.0445	-0.0373	-0.0132	0.096	-0.0618
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

# Amyotrophic lateral sclerosis

Anontosis					
Apoptosis	0.00414	0.106	-0.00376	0.0604	-0.0468
APP Metabolism	0.0131	-0.00583	0.177	-0.246	0.0215
Autophagy	0.131	0.255	0.166	0.197	0.107
Cell Cycle	0.112	0.137	0.153	0.206	0.0182
DNA Repair	-0.0892	-0.131	-0.151	-0.0262	-0.139
Endolysosome	0.145	0.232	0.15	0.159	-0.0106
Epigenetic	0.0584	0.168	0.0857	0.0567	0.0452
Immune Response	0.0534	0.148	0.0501	0.176	0.00987
Lipid Metabolism	0.0893	0.122	0.0697	0.186	-0.0313
Metal Binding and Homeostasis	0.0678	0.0655	-0.0902	0.161	-0.119
Mitochondrial Metabolism	-0.124	-0.292	-0.476	0.0155	-0.384
Myelination	0.0134	0.16	0.105	0.135	0.0029
Oxidative Stress	-0.0613	-0.0357	-0.281	0.0946	-0.135
Proteostasis	0.087	0.0408	-0.0703	0.158	-0.128
RNA Spliceosome	-0.337	0.05	-0.26	-0.405	-0.163
Structural Stabilization	0.0923	0.0257	0.0887	0.136	-0.0148
Synapse	0.128	0.111	0.151	0.125	0.0524
Tau Homeostasis					
Vasculature	-0.0593	0.0151	0.00559	0.0558	-0.132
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

### Huntington disease

APP Metabolism Autophagy	0.0067				
Autonhagy		0.179	0.452	-0.139	0.11
Autopriagy	0.00109	0.161	0.187	0.0915	-0.0615
Cell Cycle	0.0762	0.0598	0.124	0.206	-0.0986
DNA Repair	-0.131	-0.091	-0.116	-0.12	-0.194
Endolysosome	0.194	0.275	0.345	0.176	0.0464
Epigenetic	-0.0457	0.125	0.127	-0.0234	0.0582
Immune Response	-0.0586	0.102	0.131	0.0316	-0.0679
Lipid Metabolism	0.0578	0.193	0.161	0.168	0.00246
Metal Binding and Homeostasis	-0.0442	-0.0786	-0.174	0.0735	-0.226
Mitochondrial Metabolism	-0.172	-0.302	-0.497	-0.0319	-0.422
Myelination					
Oxidative Stress	-0.135	-0.0727	-0.246	-0.017	-0.204
Proteostasis	0.0381	-0.0393	-0.0654	0.142	-0.204
RNA Spliceosome					
Structural Stabilization	0.125	-0.0314	0.128	0.235	-0.0323
Synapse	0.0558	0.0653	0.205	0.0495	0.0504
Tau Homeostasis					
Vasculature	-0.0758	0.0644	0.0263	0.0611	-0.132
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

# Spinocerebellar ataxia

Apoptosis	-0.0567	0.186	0.0602	0.0155	-0.0781
APP Metabolism					
Autophagy	0.124	0.35	0.251	0.198	0.0307
Cell Cycle	0.125	0.35	0.39	0.112	0.272
DNA Repair					
Endolysosome	0.0111	0.261	0.313	-0.0944	0.0337
Epigenetic	0.00171	0.272	0.27	0.0102	0.159
Immune Response	-0.0131	0.22	0.244	0.0444	-0.0239
Lipid Metabolism	-0.00125	0.222	0.139	0.0702	-0.00843
Metal Binding and Homeostasis	-0.16	0.0197	-0.0333	-0.183	-0.219
Mitochondrial Metabolism	0.0141	0.132	0.0839	0.00432	-0.0563
Myelination					
Oxidative Stress	0.072	0.335	0.247	0.128	0.0439
Proteostasis	0.0299	0.0394	-0.044	0.102	-0.179
RNA Spliceosome					
Structural Stabilization	-0.00574	0.0498	0.194	-0.0207	-0.0375
Synapse	-0.0599	0.107	0.158	-0.0774	-0.0834
Tau Homeostasis					
Vasculature	-0.149	0.237	0.152	-0.12	0.00658
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

F	Prion	disease	Э

Apoptosis	-0.000194	0.134	0.0766	0.0245	-0.0441
APP Metabolism					
Autophagy	0.0326	0.0439	0.0263	0.0733	-0.00353
Cell Cycle	0.173	0.222	0.189	0.231	0.0896
DNA Repair	0.0317	0.0517	0.00355	0.0255	-0.0334
Endolysosome	0.152	0.205	0.111	0.169	-0.00825
Epigenetic	0.156	0.385	0.375	0.126	0.282
Immune Response	0.0997	0.123	0.0974	0.131	0.0669
Lipid Metabolism	0.0453	0.155	0.116	0.0719	0.0238
Metal Binding and Homeostasis	0.0865	0.0352	-0.0032	0.136	-0.101
Mitochondrial Metabolism	-0.183	-0.338	-0.509	-0.0626	-0.404
Myelination					
Oxidative Stress	-0.0329	-0.0027	-0.1	-0.00595	-0.0541
Proteostasis	0.0394	-0.0602	-0.088	0.108	-0.156
RNA Spliceosome					
Structural Stabilization	0.102	0.0937	0.168	0.205	0.0879
Synapse	0.0602	0.0831	0.121	0.0575	0.0457
Tau Homeostasis					
Vasculature	0.00173	0.0893	0.145	-0.0165	0.000651
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	,		0	•	
Apoptosis	0.0359	0.0944	0.0495	0.0942	0.0152
APP Metabolism	0.122	0.196	0.336	-0.0428	0.122
Autophagy	0.0686	0.162	0.128	0.108	0.0225
Cell Cycle	0.16	0.216	0.266	0.179	0.173
DNA Repair	0.0714	0.00827	0.105	0.0942	0.00286
Endolysosome	0.167	0.192	0.206	0.178	0.0757
Epigenetic	0.0668	0.158	0.124	0.0815	0.104
Immune Response	0.0972	0.142	0.125	0.142	0.0879
Lipid Metabolism	0.047	0.0803	0.082	0.114	-0.0014
Metal Binding and Homeostasis	0.106	0.0795	0.0195	0.132	-0.048
Mitochondrial Metabolism	-0.0798	-0.19	-0.323	0.0108	-0.287
Myelination	0.19	0.347	0.238	0.207	0.213
Oxidative Stress	0.0335	0.0789	-0.0529	0.126	-0.0201
Proteostasis	0.106	0.0881	0.0311	0.152	-0.00666
RNA Spliceosome					
Structural Stabilization	0.122	0.0611	0.139	0.147	0.0665
Synapse	0.126	0.139	0.197	0.104	0.118
Tau Homeostasis					
Vasculature	0.0297	0.126	0.171	0.0743	0.0582
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Pathways of neurodegeneration – multiple diseases

0.228

0.273

-0.0567

0.143

0.0877

0.238

0.282

0.0935

0.275

WT/WT

0.414

0.296

0.125

0.312

0.291

0.265

0.317

0.136

0.333

WT/FC

	Cocaine addic				
Apoptosis	0.253	0.307	0.305		
APP Metabolism					

Autophagy

Cell Cycle

**DNA Repair** 

**Epigenetic** 

Myelination

**Proteostasis** 

Synapse

Vasculature

Oxidative Stress

**RNA Spliceosome** 

Tau Homeostasis

Structural Stabilization

Endolysosome

Immune Response

Metal Binding and Homeostasis

Mitochondrial Metabolism

Lipid Metabolism

addict	ion

0.464

0.356

0.0928

0.419

0.374

0.406

0.478

0.252

0.424

FC/FC

0.281

0.26

0.0394

0.253

0.234

0.261

0.41

0.167

0.208

VS/VS

Cuon		
	0.337	0.296

addiction						
.005	0.227	0.000				

0.275

0.294

-0.00126

0.105

0.0734

0.237

0.25

0.135

0.448

WT/VS

### Amphetamine addiction Apoptosis 0.124 0.285 0.318 0.151 APP Metabolism

0.195

Autophagy					
Cell Cycle	0.158	0.475	0.438	0.0594	0.337
DNA Repair					
Endolysosome	0.302	0.44	0.713	-0.0163	0.419
Epigenetic	0.3	0.548	0.537	0.29	0.432
Immune Response	0.00277	0.282	0.351	-0.0703	0.181
Lipid Metabolism	0.151	0.526	0.591	0.169	0.325

<b>- ,</b>					
DNA Repair					
Endolysosome	0.302	0.44	0.713	-0.0163	0.419
Epigenetic	0.3	0.548	0.537	0.29	0.432
Immune Response	0.00277	0.282	0.351	-0.0703	0.181
Lipid Metabolism	0.151	0.526	0.591	0.169	0.325
letal Binding and Homeostasis	0.157	0.384	0.412	0.0827	0.278
Mitochondrial Metabolism	0.0358	0.33	0.324	0.0621	0.178
Myelination					
Oxidative Stress					
Proteostasis	0.252	0.299	0.452	0.221	0.217
RNA Spliceosome					

Epigenetic	0.3	0.548	0.537	0.29	0.432
Immune Response	0.00277	0.282	0.351	-0.0703	0.181
Lipid Metabolism	0.151	0.526	0.591	0.169	0.325
Metal Binding and Homeostasis	0.157	0.384	0.412	0.0827	0.278
Mitochondrial Metabolism	0.0358	0.33	0.324	0.0621	0.178
Myelination					
Oxidative Stress					
Proteostasis	0.252	0.299	0.452	0.221	0.217
RNA Spliceosome					
Structural Stabilization	0.193	0.281	0.426	0.0328	0.238
Synapse	0.141	0.255	0.351	0.0715	0.182
Tau Homeostasis					
Vasculature	0.21	0.432	0.533	0.104	0.358
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

<del>-</del>					
Mitochondrial Metabolism	0.0358	0.33	0.324	0.0621	0.178
Myelination					
Oxidative Stress					
Proteostasis	0.252	0.299	0.452	0.221	0.217
RNA Spliceosome					
Structural Stabilization	0.193	0.281	0.426	0.0328	0.238
Synapse	0.141	0.255	0.351	0.0715	0.182
Tau Homeostasis					
Vasculature	0.21	0.432	0.533	0.104	0.358
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Proteostasis	0.252	0.299	0.452	0.221	0.217
RNA Spliceosome					
Structural Stabilization	0.193	0.281	0.426	0.0328	0.238
Synapse	0.141	0.255	0.351	0.0715	0.182
Tau Homeostasis					
Vasculature	0.21	0.432	0.533	0.104	0.358
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Morphine addiction					
Apoptosis						
APP Metabolism						
Autophagy						
Cell Cycle						
DNA Repair						
Endolysosome	0.0706	0.15	0.239	0.0847	0.148	
Epigenetic						
Immune Response	-0.0911	-0.0853	0.174	-0.168	-0.0954	
Lipid Metabolism	-0.0468	0.195	0.27	-0.153	0.0334	
Metal Binding and Homeostasis	-0.0466	0.0883	0.243	-0.128	0.072	
Mitochondrial Metabolism						
Myelination						
Oxidative Stress						
Proteostasis	-0.0197	0.065	0.234	-0.127	-0.0625	
RNA Spliceosome						
Structural Stabilization	0.0686	0.188	0.387	-0.0198	0.093	
Synapse	0.02	0.135	0.251	-0.0601	0.103	
Tau Homeostasis						
Vasculature	0.0649	0.144	0.257	0.0276	0.119	
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS	

		Nic	otine addict	ion	
Apoptosis					
APP Metabolism	0.00855	0.153	0.607	-0.387	0.139
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse	0.0693	0.278	0.416	-0.0669	0.135
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

			Alcoholism		
Apoptosis	0.128	0.137	0.123	0.245	0.238
APP Metabolism					
Autophagy					
Cell Cycle	0.214	0.286	0.236	0.234	0.202
DNA Repair					
Endolysosome	0.109	0.161	0.457	0.0858	0.294
Epigenetic	0.264	0.179	0.201	0.316	0.233
Immune Response	0.022	0.141	0.2	0.0325	0.203
Lipid Metabolism	0.21	0.201	0.343	0.241	0.243
Metal Binding and Homeostasis	0.165	0.243	0.229	0.146	0.186
Mitochondrial Metabolism	0.064	0.252	0.209	0.0989	0.156
Myelination					
Oxidative Stress	0.324	0.299	0.374	0.335	0.297
Proteostasis	0.204	0.187	0.264	0.259	0.211
RNA Spliceosome					
Structural Stabilization	0.262	0.342	0.331	0.237	0.344
Synapse	0.0854	0.155	0.2	0.128	0.158
Tau Homeostasis					
Vasculature	0.18	0.194	0.353	0.184	0.294
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

### Lipid and atherosclerosis

0.152

0.158

0.21

0.264

0.0775

0.196

0.175

0.157

0.121

0.231

0.203

0.511

0.346

0.216

0.202

0.283

0.147

VS/VS

Apoptosis	-0.0207	0.119	0.0532	0.0386
APP Metabolism	0.0271	0.278	0.431	0.122
Autophagy	0.0113	0.161	0.15	0.0536
Cell Cycle	0.123	0.284	0.244	0.0993
DNA Repair	-0.00439	0.0321	-0.00727	0.0747
Endolysosome	0.0491	0.146	0.136	0.0908
Epigenetic	0.0564	0.205	0.154	0.108
Immune Response	0.0289	0.11	0.0844	0.0776
Lipid Metabolism	-0.00102	0.113	0.071	0.0589
Metal Binding and Homeostasis	0.0464	0.198	0.207	0.0672
Mitochondrial Metabolism	0.0428	0.163	0.114	0.0784
Myelination	0.221	0.497	0.328	0.331
Oxidative Stress	0.115	0.361	0.229	0.207
Proteostasis	0.0322	0.196	0.144	0.0975
RNA Spliceosome				
Structural Stabilization	-0.0036	0.152	0.0914	0.0097
Synapse	0.104	0.307	0.267	0.091
Tau Homeostasis				
Vasculature	0.0347	0.181	0.153	0.0517
	WT/WT	WT/FC	FC/FC	WT/VS

# Fluid shear stress and atherosclerosis

	-				. •
Apoptosis	0.115	0.321	0.228	0.131	0.285
APP Metabolism					
Autophagy	0.154	0.303	0.266	0.177	0.383
Cell Cycle	0.225	0.405	0.3	0.275	0.375
DNA Repair	-0.0364	0.0912	0.0521	0.0454	0.0592
Endolysosome	0.0787	0.151	0.0947	0.172	0.254
Epigenetic	0.185	0.396	0.308	0.212	0.375
Immune Response	0.111	0.219	0.173	0.182	0.231
Lipid Metabolism	0.076	0.223	0.144	0.136	0.24
Metal Binding and Homeostasis	0.101	0.228	0.235	0.153	0.26
Mitochondrial Metabolism	0.133	0.275	0.152	0.177	0.278
Myelination	0.423	0.553	0.351	0.52	0.62
Oxidative Stress	0.143	0.277	0.178	0.263	0.253
Proteostasis	0.163	0.257	0.154	0.287	0.275
RNA Spliceosome					
Structural Stabilization	0.127	0.225	0.199	0.216	0.307
Synapse	0.204	0.388	0.281	0.18	0.405
Tau Homeostasis					
Vasculature	0.107	0.239	0.189	0.167	0.279
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

# Hypertrophic cardiomyopathy

Apoptosis	0.0436	0.297	0.222	0.164	
APP Metabolism					
Autophagy	0.0746	0.43	0.357	0.0531	
Cell Cycle					

0.258

0.206

0.0447

-0.0764

-0.147

0.0615

-0.0418

-0.0344

0.0457

-0.0333

WT/WT

Endolysosome

Immune Response

Metal Binding and Homeostasis

Mitochondrial Metabolism

Lipid Metabolism

**Epigenetic** 

Myelination

**Proteostasis** 

Synapse

Vasculature

Oxidative Stress

**RNA Spliceosome** 

Tau Homeostasis

Structural Stabilization

APP Metabolism					
Autophagy	0.0746	0.43	0.357	0.0531	0.248
Cell Cycle					
DNA Repair					

0.301

0.262

0.15

-0.0101

-0.0427

0.198

0.101

-0.00347

0.139

-0.00468

WT/FC

0.337

0.301

0.2

0.038

0.0308

0.335

0.208

0.067

0.24

0.156

FC/FC

0.363

0.306

0.133

0.0144

-0.101

-0.0305

-0.0262

0.0381

0.0299

-0.00805

WT/VS

0.248

0.292

0.326

0.211

0.0994

-0.00648

0.201

0.139

0.0767

0.181

0.085

VS/VS

### 0.0532

0.276

Arrhythmogenic right ventricular cardiomyopathy

0.251

0.285

0.24

0.109

0.144

0.261

0.16

0.233

0.267

FC/FC

0.135

0.263

0.0208

-0.0203

-0.0586

-0.0385

0.0168

0.0203

-0.0784

WT/VS

0.348

0.212

0.127

0.0527

0.167

0.115

0.191

0.125

VS/VS

0.273

Autophagy

APP Metabolism

Endolysosome

Immune Response

Metal Binding and Homeostasis

Mitochondrial Metabolism

Lipid Metabolism

**Epigenetic** 

Myelination

**Proteostasis** 

Synapse

Vasculature

Oxidative Stress

**RNA Spliceosome** 

Tau Homeostasis

Structural Stabilization

**Apoptosis** 

Cell Cycle DNA Repair

0.218

0.0159

-0.0596

-0.0799

0.00179

-0.00665

0.0437

-0.0232

WT/WT

0.189

0.15

-0.000327

-0.026

0.0943

0.055

0.124

0.0726

WT/FC

		Dilate	d cardiomyc	pathy	
Apoptosis	0.0826	0.271	0.191	0.182	0.237
APP Metabolism					
Autophagy	0.0996	0.26	0.263	0.13	0.11
Cell Cycle					
DNA Repair					
Endolysosome	0.349	0.372	0.462	0.376	0.295
Epigenetic					
Immune Response	0.0391	0.155	0.198	0.0836	0.141
Lipid Metabolism	-0.0495	0.0216	0.122	0.00197	0.0985
Metal Binding and Homeostasis	-0.102	-0.0347	0.068	-0.0647	-0.0269
Mitochondrial Metabolism	0.092	0.13	0.331	0.046	0.138

Mitochondrial Metabolism

Myelination					
Oxidative Stress					
Proteostasis	-0.0149	0.0516	0.188	-0.0122	0.0502
RNA Spliceosome					
Structural Stabilization	-0.0271	-0.0344	0.0603	0.0439	0.0519
Synapse	0.0476	0.0954	0.219	0.0399	0.138
Tau Homeostasis					
Vasculature	-0.0177	-0.0155	0.162	0.00189	0.0728
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

# Diabetic cardiomyopathy

		Diabei	ic cardiomy	оранту	
Apoptosis	0.0665	0.142	0.097	0.138	0.0428
APP Metabolism	-0.0387	0.206	0.272	0.1	0.113
Autophagy	0.12	0.239	0.216	0.112	0.178
Cell Cycle	0.146	0.311	0.238	0.12	0.244
DNA Repair					
Endolysosome	0.0123	0.0962	0.103	0.149	0.0404
Epigenetic	0.00989	0.282	0.237	-0.0575	0.141
Immune Response	0.0205	0.109	0.133	0.0856	0.117
Lipid Metabolism	-0.0278	0.103	0.0236	0.0647	0.0242
Metal Binding and Homeostasis	-0.0451	-0.0541	-0.155	0.0151	-0.137
Mitochondrial Metabolism	-0.17	-0.27	-0.462	-0.06	-0.366
Myelination					
Oxidative Stress	-0.0587	-0.0436	-0.117	0.0163	-0.00516
Proteostasis	0.0203	0.00944	0.0088	0.126	-0.055
RNA Spliceosome					
Structural Stabilization	0.0355	0.106	0.147	0.17	0.115
Synapse	0.02	0.157	0.141	0.0581	0.0885
Tau Homeostasis					
Vasculature	-0.108	0.0318	0.0658	0.0257	0.0142
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS
	VV 1/VV 1	VVI/FC	FO/FC	VV 17 V S	V3/V3

Vii	ral my	ocardi	tis

			•		
Apoptosis	0.0827	-0.0572	0.212	0.149	0.0293
APP Metabolism					
Autophagy	0.128	0.243	0.482	0.211	0.14
Cell Cycle					
DNA Repair					
Endolysosome	0.105	0.0711	0.281	0.0966	0.152
Epigenetic					
Immune Response	0.144	0.154	0.304	0.133	0.204
Lipid Metabolism	0.0439	0.0374	0.165	0.0868	0.115
letal Binding and Homeostasis					
Mitochondrial Metabolism	0.077	0.147	0.21	0.182	0.0878
Myelination					
Oxidative Stress					
Proteostasis	0.000152	0.139	0.217	0.0783	0.0794
RNA Spliceosome					
Structural Stabilization	-0.0166	0.024	0.18	0.0634	0.128
Synapse	0.0386	0.126	0.311	0.0212	0.138
Tau Homeostasis					
Vasculature	0.0524	0.00671	0.187	0.0805	0.0975
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

# Type II diabetes mellitus

		туре п	ulabetes II	leilitus	
Apoptosis	-0.0224	0.233	0.265	-0.0401	0.0553
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic	0.0635	0.325	0.417	-0.00722	0.128
Immune Response	0.0229	0.215	0.234	0.0228	0.0814
Lipid Metabolism	0.0627	0.304	0.286	0.0383	0.172
Metal Binding and Homeostasis	0.115	-0.0129	0.235	-0.167	0.0031
Mitochondrial Metabolism	0.134	0.23	0.345	0.0259	0.102
Myelination					
Oxidative Stress					
Proteostasis	0.31	0.414	0.39	0.334	0.282
RNA Spliceosome					
Structural Stabilization	0.117	0.256	0.305	0.0691	0.131
Synapse	0.133	0.254	0.455	-0.0426	0.162
Tau Homeostasis					
Vasculature	0.0027	0.133	0.224	-0.018	-0.0259
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	I diabetes m	ellitus	
Anantasia			
Apoptosis -0.0259 -0.0498	0.0387	0.134	0.12
APP Metabolism			
Autophagy			
Cell Cycle			
DNA Repair			
Endolysosome 0.108 0.188	0.209	0.147	0.281
Epigenetic			
Immune Response 0.000673 0.0562	0.132	0.0691	0.213
Lipid Metabolism -0.0499 -0.0737	0.0713	-0.0308	0.0426
Metal Binding and Homeostasis			
Mitochondrial Metabolism			
Myelination			
Oxidative Stress			
Proteostasis 0.0855 0.0883	0.334	0.118	0.306
RNA Spliceosome			
Structural Stabilization			
Synapse			
Tau Homeostasis			
Vasculature			
WT/WT WT/FC	FC/FC	WT/VS	VS/VS

	ı	Maturity ons	et diabetes	of the young	J
Apoptosis					
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic	0.101	0.0894	-0.0542	0.253	0.14
Immune Response					
Lipid Metabolism					
Metal Binding and Homeostasis					
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis					
RNA Spliceosome					
Structural Stabilization					
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

### Alcoholic liver disease

		7 (100)	iono nvoi aio	oacc	
Apoptosis	-0.086	0.144	0.0406	0.0159	0.111
APP Metabolism					
Autophagy	-0.0245	0.311	0.281	-0.00968	0.183
Cell Cycle	0.0547	0.282	0.154	0.129	0.174
DNA Repair	-0.219	-0.0328	-0.0304	-0.065	-0.0487
Endolysosome	-0.000884	0.0598	-0.0108	0.118	0.115
Epigenetic	-0.0485	0.164	0.108	0.0154	0.142
Immune Response	-0.0299	0.0283	-0.0166	0.0771	0.0693
Lipid Metabolism	-0.0208	0.0964	0.0557	0.115	0.0155
Metal Binding and Homeostasis	-0.102	0.121	0.0919	-0.0307	0.0559
Mitochondrial Metabolism	0.021	0.164	0.146	0.16	0.0838
Myelination					
Oxidative Stress	-0.00822	0.491	0.318	0.0429	0.249
Proteostasis	0.0433	0.231	0.237	0.0886	0.224
RNA Spliceosome					
Structural Stabilization	0.00134	0.164	0.11	0.0828	0.264
Synapse	0.0958	0.209	0.211	0.172	0.194
Tau Homeostasis					
Vasculature	0.0287	0.0402	0.0136	0.155	0.061
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

# Non-alcoholic fatty liver disease

Apoptosis	0.0237	0.197	0.101	0.163	0.0303
APP Metabolism					
Autophagy	0.131	0.406	0.271	0.217	0.222
Cell Cycle	0.261	0.337	0.27	0.416	0.195
DNA Repair					
Endolysosome	-0.111	0.177	-0.0179	0.0214	0.0177
Epigenetic	0.149	0.286	0.24	0.268	0.145
Immune Response	0.0108	0.149	0.0617	0.165	0.0512
Lipid Metabolism	0.0543	0.15	0.0828	0.205	0.0742
Metal Binding and Homeostasis	-0.0019	-0.0383	-0.204	0.112	-0.279
Mitochondrial Metabolism	-0.165	-0.348	-0.531	-0.0526	-0.449
Myelination					
Oxidative Stress	-0.0681	0.151	-0.0691	0.0378	-0.109
Proteostasis	0.184	0.284	0.133	0.344	0.0751
RNA Spliceosome					
Structural Stabilization	0.0693	0.356	0.205	0.154	0.158
Synapse	0.149	0.337	0.207	0.199	0.206
Tau Homeostasis					
Vasculature	0.0391	0.211	0.118	0.197	0.104
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

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Apoptosis	0.0415	0.214	0.211	0.0395	0.211
APP Metabolism					
Autophagy	0.131	0.388	0.436	0.108	0.337
Cell Cycle	0.054	0.201	0.165	0.128	0.172
DNA Repair					
Endolysosome	0.0277	0.134	0.11	0.173	0.307
Epigenetic	-0.000114	0.139	0.127	0.0292	0.0939
Immune Response	0.0278	0.181	0.136	0.0474	0.135
Lipid Metabolism	0.045	0.132	0.0686	0.0855	0.124
Metal Binding and Homeostasis	0.0483	0.198	0.0849	0.118	0.245
Mitochondrial Metabolism	0.0459	0.233	0.224	0.0501	0.227
Myelination					
Oxidative Stress	0.0608	0.364	0.287	0.0726	0.349
Proteostasis	0.217	0.229	0.205	0.256	0.305
RNA Spliceosome					
Structural Stabilization	0.037	0.2	0.179	0.0427	0.243
Synapse	0.00444	0.273	0.271	-0.00617	0.216
Tau Homeostasis					
Vasculature	0.119	0.171	0.279	0.257	0.313
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	AGE-RAGE signaling pathway in diabetic complications					
Apoptosis	0.0612	0.151	0.165	0.145	0.202	
APP Metabolism						
Autophagy	0.159	0.361	0.262	0.189	0.308	
Cell Cycle	0.136	0.187	0.229	0.233	0.246	
DNA Repair	-0.0492	0.118	0.0879	0.0388	0.167	
Endolysosome	-0.0253	0.171	0.113	0.0138	0.211	
Epigenetic	0.065	0.218	0.24	0.091	0.195	
Immune Response	0.0606	0.123	0.164	0.126	0.181	
Lipid Metabolism	0.029	0.135	0.146	0.116	0.178	
Metal Binding and Homeostasis	-0.0689	-0.0197	0.123	0.0337	0.115	
Mitochondrial Metabolism	0.0604	0.181	0.124	0.0919	0.192	
Myelination						
Oxidative Stress	0.159	0.267	0.26	0.239	0.313	
Proteostasis	0.0536	0.109	0.114	0.21	0.248	
RNA Spliceosome						
Structural Stabilization	0.0113	0.0412	0.0935	0.146	0.196	
Synapse	0.0654	0.165	0.206	0.107	0.251	
Tau Homeostasis						
Vasculature	0.0595	0.111	0.157	0.162	0.211	
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS	

### Cushing syndrome

		Cus	silling syriuic	ше	
Apoptosis	0.0868	0.266	0.309	0.19	0.334
APP Metabolism					
Autophagy					
Cell Cycle	0.124	0.276	0.394	0.153	0.305
DNA Repair	-0.0167	0.0869	0.327	0.0157	0.226
Endolysosome	0.279	0.341	0.354	0.223	0.345
Epigenetic	0.0379	0.0892	0.205	0.105	0.181
Immune Response	0.142	0.185	0.273	0.14	0.263
Lipid Metabolism	0.104	0.23	0.325	0.147	0.25
Metal Binding and Homeostasis	0.0909	0.126	0.33	0.0478	0.164
Mitochondrial Metabolism	0.088	0.173	0.205	0.0469	0.101
Myelination					
Oxidative Stress	0.119	0.279	0.296	0.212	0.344
Proteostasis	0.16	0.205	0.259	0.197	0.224
RNA Spliceosome					
Structural Stabilization	0.162	0.23	0.266	0.172	0.277
Synapse	0.184	0.268	0.318	0.17	0.258
Tau Homeostasis					
Vasculature	0.208	0.27	0.371	0.272	0.34
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

# EGFR tyrosine kinase inhibitor resistance

Apoptosis	0.0506	0.168	0.18	0.117	0.263
APP Metabolism					
Autophagy	0.213	0.271	0.34	0.293	0.334
Cell Cycle	0.151	0.176	0.199	0.198	0.377
DNA Repair	0.258	0.201	0.398	0.339	0.281
Endolysosome	0.209	0.234	0.416	0.24	0.319
Epigenetic	0.0876	0.276	0.257	0.102	0.417
Immune Response	0.0922	0.185	0.229	0.102	0.284
Lipid Metabolism	0.0822	0.16	0.224	0.13	0.279
Metal Binding and Homeostasis	0.0326	0.117	0.0746	0.0181	0.133
Mitochondrial Metabolism	0.189	0.281	0.318	0.198	0.385
Myelination	0.163	0.259	0.248	0.267	0.382
Oxidative Stress	0.183	0.316	0.33	0.244	0.49
Proteostasis	0.21	0.274	0.254	0.271	0.314
RNA Spliceosome					
Structural Stabilization	0.139	0.235	0.272	0.163	0.325
Synapse	0.0493	0.127	0.174	0.11	0.285
Tau Homeostasis					
Vasculature	0.0912	0.221	0.325	0.0828	0.318
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

Platinum	drug	resi	stance	

Apoptosis	0.00629	0.147	0.145	0.101	0.109
APP Metabolism					
Autophagy	0.14	0.26	0.281	0.322	0.207
Cell Cycle	0.039	0.135	0.21	0.139	0.0764
DNA Repair	0.0663	0.142	0.235	0.123	0.0605
Endolysosome	0.0779	0.167	0.262	0.18	0.134
Epigenetic	0.0971	0.245	0.296	0.126	0.166
Immune Response	0.0325	0.159	0.167	0.131	0.105
Lipid Metabolism	0.141	0.253	0.215	0.222	0.209
letal Binding and Homeostasis	-0.13	0.129	0.151	-0.0276	0.0038
Mitochondrial Metabolism	0.17	0.275	0.176	0.274	0.161
Myelination					
Oxidative Stress	-0.0327	0.167	0.21	0.11	0.0672
Proteostasis	0.112	0.19	0.196	0.228	0.175
RNA Spliceosome					
Structural Stabilization	0.0356	0.272	0.231	0.193	0.271
Synapse	0.147	0.226	0.27	0.338	0.243
Tau Homeostasis					
Vasculature	0.0198	0.249	0.189	0.146	0.195
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

	Antifolate resistance				
Apoptosis		Allui	וטומוכ וכטוטומ	ai iC <del>C</del>	
APP Metabolism					
Autophagy					
Cell Cycle					
DNA Repair					
Endolysosome					
Epigenetic					
Immune Response	0.0773	0.0975	-0.11	0.116	0.0171
Lipid Metabolism	-0.103	-0.0698	-0.118	0.0768	-0.0393
Metal Binding and Homeostasis	-0.103	-0.0030	-0.140	0.0700	-0.0393
Mitochondrial Metabolism					
Myelination					
Oxidative Stress					
Proteostasis	-0.164	-0.111	-0.0608	0.0385	0.14
RNA Spliceosome					
Structural Stabilization	-0.05	0.0862	-0.0219	0.265	0.177
Synapse					
Tau Homeostasis					
Vasculature					
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS

# Endocrine resistance

Apoptosis	0.0769	0.236	0.254	0.164	0.279
APP Metabolism					
Autophagy	0.271	0.309	0.357	0.358	0.337
Cell Cycle	0.083	0.179	0.211	0.257	0.257
DNA Repair	0.0961	0.172	0.22	0.289	0.196
Endolysosome	0.222	0.278	0.351	0.318	0.303
Epigenetic	0.0317	0.187	0.318	0.156	0.257
Immune Response	0.155	0.233	0.3	0.215	0.263
Lipid Metabolism	0.112	0.245	0.36	0.14	0.264
Metal Binding and Homeostasis	0.0554	0.138	0.169	0.173	0.082
Mitochondrial Metabolism	0.191	0.284	0.263	0.226	0.273
Myelination	0.259	0.219	0.367	0.446	0.419
Oxidative Stress	0.278	0.474	0.511	0.408	0.418
Proteostasis	0.227	0.267	0.321	0.35	0.298
RNA Spliceosome					
Structural Stabilization	0.171	0.199	0.292	0.311	0.329
Synapse	0.0868	0.195	0.258	0.16	0.249
Tau Homeostasis					
Vasculature	0.127	0.235	0.35	0.175	0.278
	WT/WT	WT/FC	FC/FC	WT/VS	VS/VS