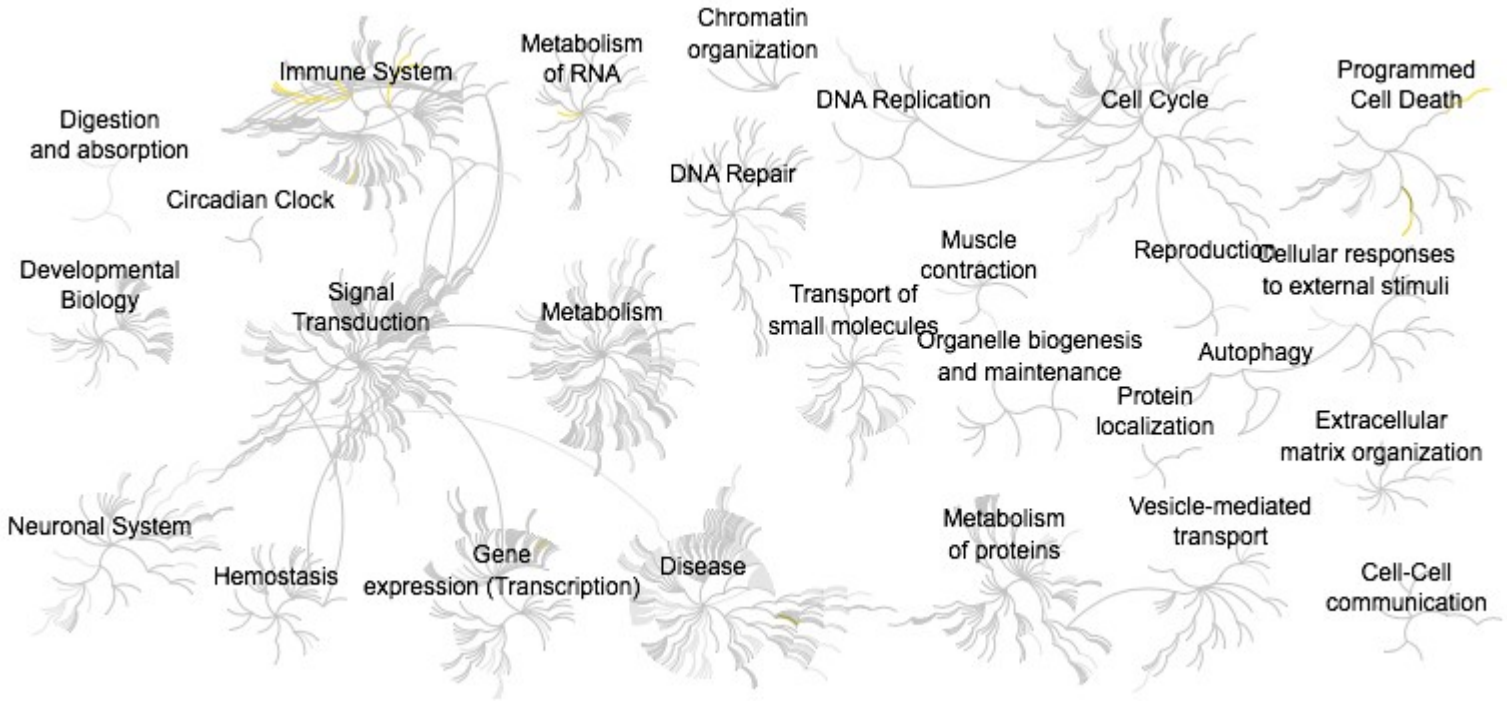
Genome-wide overview of pathways regulated by differentially expressed genes



4. Most significant pathways

The following table shows the 25 most relevant pathways sorted by p-value.

Pathway name	Entities				Reactions	
	found	ratio	p-value	FDR*	found	ratio
Antigen Presentation: Folding, assembly and peptide loading of class I MHC	76 / 102	0.007	1.11e-16	1.49e-14	15 / 16	0.001
ER-Phagosome pathway	81 / 165	0.012	1.11e-16	1.49e-14	9 / 10	8.19e-04
Class I MHC mediated antigen processing & presentation	102 / 465	0.033	1.11e-16	1.49e-14	40 / 48	0.004
Interferon gamma signaling	103 / 250	0.018	1.11e-16	1.49e-14	12 / 15	0.001
Antigen processing-Cross presentation	83 / 187	0.013	1.11e-16	1.49e-14	18 / 23	0.002
Endosomal/Vacuolar pathway	73 / 82	0.006	1.11e-16	1.49e-14	3 / 4	3.28e-04
Interferon alpha/beta signaling	104 / 184	0.013	1.11e-16	1.49e-14	15 / 20	0.002
Interferon Signaling	127 / 392	0.028	1.11e-16	1.49e-14	44 / 66	0.005
Cytokine Signaling in Immune system	189 / 1,245	0.088	1.11e-16	1.49e-14	263 / 699	0.057
Immunoregulatory interactions between a Lymphoid and a non-Lymphoid cell	76 / 316	0.022	1.11e-16	1.49e-14	14 / 43	0.004
Adaptive Immune System	123 / 998	0.07	3.57e-10	4.36e-08	111 / 261	0.021
Immune System	272 / 2,803	0.198	4.95e-10	5.54e-08	570 / 1,586	0.13
TRAF6 mediated IRF7 activation	15 / 43	0.003	5.07e-07	5.23e-05	6 / 11	9.01e-04
DDX58/IFIH1-mediated induction of interferon-alpha/beta	20 / 96	0.007	1.76e-05	0.002	16 / 46	0.004
Insulin-like Growth Factor-2 mRNA Binding Proteins (IGF2BPs/IMPs/VICKZs) bind RNA	7 / 13	9.17e-04	4.03e-05	0.004	2 / 3	2.46e-04
Regulation of IFNA signaling	9 / 28	0.002	1.73e-04	0.015	4 / 5	4.10e-04
RUNX1 regulates expression of components of tight junctions	5 / 8	5.65e-04	2.61e-04	0.021	6 / 6	4.92e-04
RUNX1 regulates estrogen receptor mediated transcription	5 / 10	7.06e-04	7.12e-04	0.051	7 / 8	6.55e-04
Regulation of necroptotic cell death	7 / 21	0.001	7.24e-04	0.051	4 / 5	4.10e-04
CASP8 activity is inhibited	5 / 14	9.88e-04	0.003	0.205	2 / 3	2.46e-04
RIPK1-mediated regulated necrosis	7 / 28	0.002	0.004	0.22	5 / 13	0.001
Regulated Necrosis	7 / 28	0.002	0.004	0.22	5 / 13	0.001
Regulation by c-FLIP	4 / 11	7.76e-04	0.007	0.415	4 / 4	3.28e-04
Dimerization of procaspase-8	4 / 11	7.76e-04	0.007	0.415	3 / 3	2.46e-04

Pathway name	Entities				Reactions	
	found	ratio	p-value	FDR*	found	ratio
Programmed Cell Death	23 / 195	0.014	0.01	0.524	42 / 152	0.012

* False Discovery Rate