Table 6. Quantitative evaluation of L2L results by theme

Topic in L2L database	Topic description	Number of lists in cluster	Number of lists with $P < 0.02$ overlaps with CSB-Down data	Frequency of an equal or greater number of $P < 0.02$ overlaps in simulation data	Number of $P < 0.02$ overlaps with CSB-Up data	Frequency of an equal or greater number of $P < 0.02$ overlaps in simulation data
aged_dn	Down-regulation during ageing	13	3	0.022	3	0.015
aged_up	Up-regulation during ageing	13	4	0.0051	4	0.0056
antiinflam_dn	Down-regulated by antiinflammatory drugs	13	4	0.028	0	1
antiinflam_up	Up-regulated by antiinflammatory drugs	13	5	0.027	10	0.0016
brca_dn	Down-regulation by BRCA1/2 function	4	2	0.0065	0	1
brca_up	Up-regulation by BRCA1/2 function	7	1	0.28	4	< 0.0001
chrom-disrupt_dn	Down-regulated by chromatin-disrupting factors	26	3	0.11	10	0.0002
chrom-disrupt_up	Up-regulated by chromatin-disrupting factors	42	16	< 0.0001	8	0.0059
damage-alkyl_dn	Down-regulated by alkylating DNA damaging agents	10	1	0.22	1	0.27
damage-alkyl_up	Up-regulated by alkylating DNA damaging agents	12	1	0.29	1	0.29
damage-et743_dn	Down-regulated by Ecteinascidin-743	8	0	1	1	0.16
damage-et743_up	Up-regulated by Ecteinascidin-743	7	5	0.0003	0	1
damage-ox_dn	Down-regulated by oxidative DNA damaging agents	14	2	0.11	2	0.097
damage-ox_up	Up-regulated by oxidative DNA damaging agents	10	3	0.026	0	1

Topic in L2L database	Topic description	Number of lists in cluster	Number of lists with $P < 0.02$ overlaps with CSB-Down data	Frequency of an equal or greater number of $P < 0.02$ overlaps in simulation data	Number of $P < 0.02$ overlaps with CSB-Up data	Frequency of an equal or greater number of $P < 0.02$ overlaps in simulation data
damage-uv_dn	Down-regulated by ultraviolet DNA damage	24	3	0.090	4	0.031
damage-uv_up	Up-regulated by ultraviolet DNA damage	17	6	0.0004	7	0.0001
hypoxia_up	Up-regulated by hypoxia	8	7	< 0.0001	0	1
ifn_dn	Down-regulated by interferons	5	0	1	0	1
ifn_up	Up-regulated by interferons	12	3	0.033	11	< 0.0001