

**Table S4.** Tissue salience ratio of genes up-regulated in response to chronic exposures. (A) Dataset of up-regulated genes with BPP > 0.95. (B) Dataset of up-regulated genes with BPP > 0.99. CNS stands for central nervous system. Data is shown for genes differentially expressed in each of 3 treatments (BPA, high sugar, and the mixture). Background refers to the complete set of genes that passed the quality control steps and entered the analysis of differential expression. “Up” and “Down” identifies gene sets expressed in the tissue at a level that is above or below the whole organism average, respectively.

**A**

<b>MIDGUT</b>	Background	BPA	High sugar	Mixture
Up	1158	68	65	102
Down	2971	87	123	138
Ratio	0.39	0.78	0.52	0.74

*P-value = 1.342e-08, Fisher’s exact test*

<b>HINDGUT</b>	Background	BPA	High sugar	Mixture
Up	1415	73	96	133
Down	2633	76	91	104
Ratio	0.54	0.96	1.05	1.28

*P-value = 1.151e-14, Fisher’s exact test*

<b>CNS</b>	Background	BPA	High sugar	Mixture
Up	1704	62	75	88
Down	2481	101	115	148
Ratio	0.69	0.61	0.65	0.60

*P-value = 0.6754, Fisher’s exact test*

<b>TESTIS</b>	Background	BPA	High sugar	Mixture
Up	1733	42	37	39
Down	2722	136	168	221
Ratio	0.64	0.31	0.22	0.18

*P-value < 2.2e-16, Fisher’s exact test*

**B**

<b>MIDGUT</b>	Background	BPA	High sugar	Mixture
Up	1158	13	10	24
Down	2971	13	26	36
Ratio	0.39	1.0	0.38	0.67

*P-value = 0.020, Fisher’s exact test*

<b>HINDGUT</b>	Background	BPA	High sugar	Mixture
Up	1415	20	18	33
Down	2633	7	20	27
Ratio	0.54	2.9	0.90	1.22

*P-value = 1.80e-06, Fisher’s exact test*

<b>CNS</b>	Background	BPA	High sugar	Mixture
Up	1704	10	13	23
Down	2481	19	29	43
Ratio	0.69	0.53	0.45	0.53

*P-value = 0.415, Fisher’s exact test*

<b>TESTIS</b>	Background	BPA	High sugar	Mixture
Up	1733	5	6	3
Down	2722	28	38	61
Ratio	0.64	0.19	0.16	0.05

*P-value = 3.459e-13, Fisher’s exact test*