

**Table 3**

Differentially expressed genes identified by RNAseq within selected canonical pathways identified by IPA analysis in exposed females (normalized to ♀ vehicle; adjusted p-value <0.05).

Gene Symbol	Gene Name	♀ 25 µg BPA		♀ 250 µg BPA		♀ 0.5 µg EE <sub>2</sub>		IPA Canonical Pathway(s)
		Padj	FC	Padj	FC	Padj	FC	
<i>Adcy1</i>	Adenylate Cyclase 1	2.34E-08	1.91	5.92E-09	1.94	8.09E-10	2.01	cAMP-Mediated Signaling CREB Signaling in Neurons GABA Receptor Signaling Synaptic Long Term Potentiation
<i>Adcy5</i>	Adenylate Cyclase 5	3.97E-02	1.30	NS	NS	NS	NS	cAMP-Mediated Signaling CREB Signaling in Neurons GABA Receptor Signaling
<i>Adcy9</i>	Adenylate Cyclase 9	4.81E-02	1.43	NS	NS	3.94E-02	1.41	cAMP-Mediated Signaling CREB Signaling in Neurons GABA Receptor Signaling
<i>Akap11</i>	A-Kinase Anchoring Protein 11	5.97E-03	1.30	2.11E-03	1.31	NS	NS	cAMP-Mediated Signaling
<i>Atf2</i>	Activating Transcription Factor 2	NS	NS	NS	NS	2.62E-04	1.35	cAMP-Mediated Signaling CREB Signaling in Neurons Synaptic Long Term Potentiation
<i>Braf</i>	B-Raf Proto-Oncogene, Serine/Threonine Kinase	NS	NS	NS	NS	4.13E-03	1.44	cAMP-Mediated Signaling
<i>Camk2A</i>	Calcium/Calmodulin-Dependent Protein Kinase Ii Alpha	3.99E-03	1.33	2.62E-03	1.33	NS	NS	cAMP-Mediated Signaling CREB Signaling in Neurons Synaptic Long Term Potentiation
<i>Camk4</i>	Calcium/Calmodulin-Dependent Protein Kinase Iv	NS	NS	1.72E-02	1.41	NS	NS	cAMP-Mediated Signaling CREB Signaling in Neurons Glutamate Receptor Signaling Synaptic Long Term Potentiation
<i>Chrm3</i>	Cholinergic Receptor, Muscarinic 3	9.57E-03	1.41	4.56E-02	1.32	9.64E-03	1.37	cAMP-Mediated Signaling
<i>Creb1</i>	Camp Responsive Element Binding Protein 1	NS	NS	NS	NS	2.82E-02	1.43	cAMP-Mediated Signaling CREB Signaling in Neurons Synaptic Long Term Potentiation
<i>Gabrb1</i>	Gamma-Aminobutyric Acid Type A Receptor Beta 1 Subunit	NS	NS	2.16E-02	1.35	3.31E-03	1.40	GABA Receptor Signaling
<i>Gabrb2</i>	Gamma-Aminobutyric Acid Type A Receptor Beta 2 Subunit	4.22E-03	1.51	6.11E-05	1.67	9.03E-05	1.64	GABA Receptor Signaling
<i>Gabrb3</i>	Gamma-Aminobutyric Acid Type A Receptor Beta 3 Subunit	NS	NS	1.07E-02	1.37	1.64E-02	1.33	GABA Receptor Signaling
<i>Gabrg1</i>	Gamma-Aminobutyric Acid Type A Receptor Gamma 1 Subunit	4.96E-02	1.26	1.26E-04	1.42	3.66E-03	1.32	GABA Receptor Signaling
<i>Gabrg2</i>	Gamma Aminobutyric Acid Type A Receptor Gamma 2 Subunit	2.40E-02	1.32	4.16E-03	1.37	1.45E-02	1.32	GABA Receptor Signaling
<i>Gnaq</i>	G Protein Subunit Alpha Q	1.57E-02	1.30	4.56E-04	1.40	8.22E-04	1.37	CREB Signaling in Neurons Synaptic Long Term Depression Synaptic Long Term Potentiation
<i>Grik3</i>	Glutamate Ionotropic Receptor Kainate Type Subunit 3	1.43E+00	0.04	4.45E-02	1.41	NS	NS	CREB Signaling in Neurons Glutamate Receptor Signaling
<i>Grin2B</i>	Glutamate Ionotropic Receptor Nmda Type Subunit 2B	NS	NS	NS	NS	2.71E-02	1.38	CREB Signaling in Neurons Glutamate Receptor Signaling Synaptic Long Term Potentiation
<i>Grin3A</i>	Glutamate Ionotropic Receptor Nmda Type Subunit 3A	NS	NS	NS	NS	2.34E-02	1.37	Glutamate Receptor Signaling Synaptic Long Term Potentiation
<i>Grm3</i>	Glutamate Metabotropic Receptor 3	NS	NS	2.83E-02	1.43	2.34E-02	1.42	CREB Signaling in Neurons Glutamate Receptor Signaling Synaptic Long Term Depression Synaptic Long Term Potentiation
<i>Grm5</i>	Glutamate Metabotropic Receptor 5	1.11E-02	1.41	2.66E-03	1.44	2.83E-04	1.51	CREB Signaling in Neurons Glutamate Receptor Signaling Synaptic Long Term Depression Synaptic Long Term Potentiation
<i>Gucy1a2</i>	Guanylate Cyclase 1 Soluble Subunit Alpha 2	NS	NS	3.25E-02	1.41	3.15E-02	1.39	Synaptic Long Term Depression
<i>Htr1A</i>	5-Hydroxytryptamine Receptor 1A	NS	NS	NS	NS	2.34E-02	1.44	cAMP-Mediated Signaling
<i>Htr1B</i>	5-Hydroxytryptamine Receptor 1B	1.29E-02	1.44	1.13E-02	1.43	2.14E-04	1.58	cAMP-Mediated Signaling
<i>Irs1</i>	Insulin Receptor Substrate 1	NS	NS	NS	NS	1.45E-03	1.54	CREB Signaling in Neurons
<i>Kcnq2</i>	Potassium Voltage-Gated Channel Subfamily Q Member 2	2.88E-02	1.35	2.16E-02	1.35	2.84E-02	1.32	GABA Receptor Signaling
<i>Kcnq3</i>	Potassium Voltage-Gated Channel Subfamily Q Member 3	2.98E-02	1.40	4.48E-03	1.48	2.66E-03	1.49	GABA Receptor Signaling
<i>Kl</i>	Klotho	2.58E-02	-1.34	NS	NS	3.54E-02	-1.30	CREB Signaling in Neurons
<i>Kras</i>	Kras Proto-Oncogene, Gtpase	NS	NS	8.34E-03	1.33	2.18E-03	1.36	CREB Signaling in Neurons

**Table 3** (Continued)

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		Padj	FC	Padj	FC	Padj	FC	
<i>Mapk1</i>	Mitogen Activated Protein Kinase 1	NS	NS	NS	NS	2.24E-02	1.26	Synaptic Long Term Depression Synaptic Long Term Potentiation cAMP-Mediated Signaling CREB Signaling in Neurons
<i>Opr11</i>	Opioid Related Nociceptin Receptor 1	NS	NS	2.28E-02	1.32	9.63E-05	1.48	Synaptic Long Term Potentiation
<i>Pde4D</i>	Phosphodiesterase 4D	NS	NS	NS	NS	3.16E-02	1.36	cAMP-Mediated Signaling
<i>Pde9A</i>	Phosphodiesterase 9A	2.46E-02	-1.39	4.20E-02	-1.35	4.20E-03	-1.44	cAMP-Mediated Signaling
<i>Pde10A</i>	Phosphodiesterase 10A	2.80E-02	1.39	1.18E-02	1.42	3.22E-03	1.46	cAMP-Mediated Signaling
<i>Plcl1</i>	Phospholipase C-Like 1	NS	NS	NS	NS	2.23E-03	1.41	CREB Signaling in Neurons Synaptic Long Term Potentiation
<i>Ppm1l</i>	Protein Phosphatase, Mg <sup>2+</sup> /Mn <sup>2+</sup> Dependent, 1L	1.75E-02	1.27	1.18E-02	1.27	3.80E-02	1.22	Synaptic Long Term Depression
<i>Prkacb</i>	Protein Kinase Camp-Activated Catalytic Subunit Beta	2.55E-02	1.36	5.61E-04	1.50	2.24E-03	1.43	cAMP-Mediated Signaling CREB Signaling in Neurons Synaptic Long Term Potentiation
<i>Prkar2A</i>	Protein Kinase Camp-Dependent Type 2 Regulatory Subunit Alpha	NS	NS	3.12E-03	1.49	1.48E-02	1.40	cAMP-Mediated Signaling CREB Signaling in Neurons Synaptic Long Term Potentiation
<i>Prkca</i>	Protein Kinase C, Alpha	9.91E-03	1.49	1.12E-02	1.46	2.08E-03	1.52	Synaptic Long Term Depression Synaptic Long Term Potentiation
<i>Prkce</i>	Protein Kinase C, Epsilon	1.26E-03	1.51	8.43E-04	1.50	5.35E-03	1.41	CREB Signaling in Neurons Synaptic Long Term Depression Synaptic Long Term Potentiation
<i>Slc1A2</i>	Solute Carrier Family 1 Member 2	3.20E-05	1.74	2.73E-05	1.72	4.72E-06	1.76	Glutamate Receptor Signaling
<i>Slc38A1</i>	Solute Carrier Family 38, Member 1	2.92E-03	1.40	1.35E-04	1.47	2.48E-04	1.44	Glutamate Receptor Signaling