## **Supplemental Information 1: CORT**

CORT specific, differentially expressed genes by tissue and sex. Each table contains differentially expressed genes that were unique to CORT treatment, which are either sex-specific or overlapping across sex. We report log fold change (logFC) and false discovery rate (FDR<0.01). Upregulated genes are highlighted in red and downregulated genes are blue.

**Table 1:** Sex-specific, CORT responsive genes that were differentially expressed in the female hypothalamus

Entrez ID	Gene Name	logFC	FDR
395384	C4BPA	7.62191024	0.00081864
107053650	DDIT4	-1.3641926	0.00000722
100858474	LOC100858474	6.98742125	0.00846125

**Table 2:** Sex-specific, CORT responsive genes that were differentially expressed in the male hypothalamus.

Entrez ID	Gene Name	logFC	FDR
420592	LRRC72	-6.3325476	0.00273415

**Table 3:** Sex-specific, CORT responsive genes that were differentially expressed in the female pituitary.

Entrez ID	Gene Name	logFC	FDR
424490	ABCA4	3.42839287	0.00087459
769237	ABI3BP	-1.8203605	0.00700656
431627	ACOT12	-2.5289569	0.00792938
418479	ADAMTS1	-1.350909	0.00024624
421297	ALK	3.65729005	0.00000214
420738	ANLN	-4.8887466	0.00000171
396536	APOA1	-2.287156	0.00628945
424893	APOD	-3.5765603	0.00122136
769889	APOLD1	-1.9641033	0.0000477
421088	AQP4	-2.8884783	0.00023196
421369	ATF3	-1.8172924	0.00025
107052744	C2H8orf34	-2.9389569	0.00889358
422966	C5H11ORF9	-4.2336243	0.0000629
770209	C5H11ORF96	-1.1061049	0.00774226
423959	C6H10ORF90	-2.1371616	0.00803811
421029	CDH19	-3.9098923	0.0000448
395921	CNP	-3.1456022	0.0000169
427597	CNTN6	-3.7792797	0.00046519
428435	CREB5	-1.9740611	0.00707024
421422	DAAM2	-1.4990997	0.00768802
776499	DCLK3	-1.1192708	0.00022132
107053650	DDIT4	-1.4852373	1.21E-08
395939	DIO3	4.16775226	0.00000557
425241	DIRAS2	-1.5768922	0.00017086
421884	DST	-4.3504175	0.00023196
422551	ENPP6	-2.3741719	0.00202937
771826	ERMN	-5.2206005	0.0000169
426690	ETNK2	-2.6377886	0.00078273
415687	FA2H	-4.6788107	0.0000133
422413	FAM198B	-3.1443697	0.00300551
419084	GDPD4	-2.2916137	0.00042517
419969	GFAP	-5.9757928	0.0000837
420397	GJC2	-1.6502815	0.00442165
396489	GLUL	-1.869448	0.00110485
431418	<i>GPR139</i>	0.97276845	0.00136411
417748	GPR37	-3.3203086	0.00227741
421176	GPR37L1	-3.9247638	0.00129104
427575	GRM2	-2.3590185	0.00030702
416728	HAO1	-1.2621179	0.00867023
425975	HAPLN2	-5.4044026	0.00301302
424441	HEBP2	-2.5446672	0.00195309
428234	HEPACAM	-3.8809357	0.0000693
395128	HES4	1.43850911	0.00000368

126516	UNDDV	3.26377291	0.0042366
426516 419771	HNRPK IL10RA	1.63727996	0.0042300
	KCNJ12		0.0000163
427662		-3.0905596	
422374	KIAA1210	-1.2923415	0.00233732
420476	KIAA1462	-1.0813841	0.0082338
421934	KLF11	1.05197595	0.00745418
416732	LAMP5	-1.3715911	0.00026828
107049625	LGI3	-4.348784	0.0000167
418889	LHFP	-1.3575629	0.00026828
395705	LHX2	-2.9103875	0.00129104
100859224	LOC100859224	-5.8575025	0.0000693
100859848	LOC100859848	-2.1970407	0.00032798
107050516	LOC107050516	-3.6208916	0.00000788
107055436	LOC107055436	2.18207245	0.00834063
416927	LOC416927	-5.5556961	0.0000943
769039	LOC769039	1.01210942	0.00141439
374011	MAB21L2	1.82144289	0.0088409
396217	MBP	-1.8132315	0.00176756
107055352	MIDN	0.94959316	0.00015121
417737	MLC1	-2.1486007	0.00091839
419010	NAALAD2	-2.0113394	0.00424508
418151	NINJ2	-5.1322959	0.00000115
421833	NT5E	-4.373281	0.00019306
395334	OPN4-1	-4.4283406	0.00296667
422007	OTOF	-3.8480519	0.0000429
422030	OvoDA1	5.0744276	0.00700656
100858468	PDYN	2.40007783	0.0000954
771808	PIPOX	-3.5980662	0.0018916
415650	PLLP	-4.5541969	0.00000536
396214	PLP1	-8.9306286	3.52E-07
425328	PPP1R3C	-1.5194554	0.0000429
374187	PTCH2	1.0457712	0.00792938
416507	RASD1	-1.4417544	0.00023196
422756	RASL11B	-1.0400228	0.00708453
419521	RASSF2	-3.0547377	0.0001018
424409	RGS16	2.27790308	0.00792938
424409	RGS16	2.27790308	0.00792938
395359	SALL3	0.78394827	0.00155515
374006	SAT1	-1.4298953	0.00000125
418228	SCUBE1	-1.0781472	0.00700656
424593	SEPP1L	-4.1167333	0.0000586
416778	SEPT5	-1.8086218	0.00104754
107049626	SFTPC	-4.1712098	0.00792938
418731	SH3RF3	-2.1217571	0.0018969
396089	SHANK3	-5.6229119	0.00022132
395615	SHH	1.95114021	0.00950115
427459	SLC28A3	1.87914802	0.00296098
424576	SLC6A9	-2.9307868	0.0000629
727370	SECOLO	2.7507000	0.0000027

432368	SNAI2	1.47526135	0.00227741
395573	SOX10	-4.4550521	0.00059949
395483	SOX8	-2.3092929	0.0000501
416208	STC2	-2.2605966	0.00576626
395592	TH	6.15460068	0.00000115
419401	TMEM52	-3.2746687	0.000018
419414	TMEM88B	-5.0726254	0.00016927
396032	TNNC1	-4.7851431	0.0000288
768091	TSC22D3	-1.0163052	0.00122136
428900	TSHR	-3.1297683	0.00828514
419889	TSPAN2	-1.4330295	0.00016927
100858879	ТТҮН2	-1.7900637	0.004794
107051021	TXNIP	-1.0489175	0.00304851
374033	UGT8	-2.672702	0.00035335
428995	VWC2L	-0.8910228	0.00792938
416887	WSCD2	1.08909738	0.00202714
419618	ZC3H12A	-0.7386901	0.00587455

**Table 4:** Sex-specific, CORT responsive genes that were differentially expressed in the male pituitary.

Entrez ID	Gene Name	logFC	FDR
423846	ARHGAP19	1.78534547	0.00987046
101750689	BHLHE41	0.98090895	0.00439612
771055	C1H2ORF40	2.24634841	0.0004201
770534	C5H15ORF62	-1.8005857	0.00022038
396256	CALCA	4.21679034	0.00413295
416155	CCNJL	-2.0430218	0.00509869
395527	CD9	2.66785803	0.0004201
395386	CLEC3B	1.33483153	0.00509869
428448	COL6A6	2.16089158	0.000035
771797	FAM101A	1.59623628	0.00060137
396119	FST	3.90119714	0.0000487
428628	GRIK2	-2.1045585	0.00032328
419110	ITIH2	2.72026805	0.00048391
428101	KCNA1	2.27275094	0.00413295
425504	KCTD12	1.07818415	0.00054115
770238	KLF9	-1.1719745	0.00413295
100858447	LOC100858447	5.72337106	0.00251315
427408	LOC101747901	2.71309605	0.0004201
395944	LOC395944	7.99361432	0.00066177
404752	MID1IP1	0.83233673	0.00255214
421889	MLIP	6.35614627	0.0000263
769245	MZT2B	5.3058003	0.00240232
422078	NPTX1	2.1128186	0.00509869
693264	NPY6R	-7.0988646	0.0000263
424117	PPP1R1C	2.00472083	0.00550383
417183	PRDM12	3.76858544	0.00107929
424548	PTGFR	-1.814985	0.00753864
396459	PVALB	2.9174758	0.00026039
424312	RND3	1.72048443	0.0000263
420251	RNF19A	-0.9587109	0.00930352
107053895	RPRM	3.06692678	0.00049207
421715	RSPO3	2.70938016	0.0000867
395715	SERPINB10	2.74747729	0.00550383
417616	SLC47A2	5.32725411	0.00119519
395393	SNCA	2.53594265	0.00413295
107051027	SOX21	-4.0598474	0.00240232
420073	SSPO	-0.8494481	0.00409517
420573	TAC1	3.19991435	0.00011946
395810	TEAD3	-4.3106756	0.00944429
427825	TLCD2	2.39842736	0.0046092
417905	TMCC3	-1.3145099	0.00155544
423491	<i>TMEM179</i>	1.42215295	0.00087152
423477	TNFAIP2	1.55703179	0.00823426

**Table 5:** Sex-specific, CORT responsive genes that were differentially expressed in the female gonads

Entrez ID	Gene Name	logFC	FDR
418254	A2ML1	3.89950284	0.0000171
373945	ABCA1	-0.8640436	0.00774306
776390	ACPP	1.82354474	0.00339185
100858277	ADAMTS18	1.37171569	0.00291717
426545	ADPRHL	1.9432785	0.00888002
771077	AKD1	-2.3964956	0.0000966
415402	AQP9	-1.2561301	0.00011139
769191	ASIC4	2.1852466	0.00124521
424349	ATP6V1G3	1.56758017	0.00396435
421809	BACH2	-1.0371513	0.00393492
420744	BMPER	-1.5135845	0.00593651
770363	BSG	0.95723565	0.0000966
417179	C9ORF58	1.37426866	0.00139229
417647	CA4	-3.0968458	3.61E-07
421139	CA8	3.27931835	5.16E-07
417151	CACFD1	0.90162358	0.00367487
415996	CACNA2D3	-1.7080744	0.00174309
396519	CALB1	2.43168658	0.0000216
423990	CALCRL	-0.6870457	0.00396435
427515	CALML4	-1.8826522	0.00906168
424601	CCDC17	-3.0541205	0.00462991
415315	CD276	1.71955626	1.57E-07
107052707	CEBPD	-1.4845859	0.0000216
415476	CEMIP	-2.1134273	0.00042534
415507	CHD2	-2.7333219	0.00210892
396120	CHRNA8	-3.053195	0.00744057
428866	CHST1	1.63775732	0.00065183
395399	CITED2	-1.1996508	0.0000211
374002	CKMT1A	2.61658061	4.88E-08
424768	CLDN15	-1.7043716	0.00356272
100858979	COL10A1	6.78061851	2.49E-07
396503	COL17A1	1.74199079	0.0000404
807639	COX1	-1.4285244	0.00396435
807635	COX2	-1.6448941	0.0016697
807637	COX3	-1.3992481	0.00480154
101747832	CPNE9	3.47709786	0.00063875
768680	CREG1	-0.9083675	0.00829127
417735	CRELD2	0.90843884	0.00774306
396499	CRYBA1	2.91055692	0.0054706
408252	CTDSPL	-0.6689948	0.00727034
424152	CYBRD1	-1.1392711	0.00210892
427802	CYGB	-1.5605939	0.00210892

807641	CYTB	-1.3743486	0.00396435
107053650	DDIT4	-0.830587	0.00953958
425542	DDOST	0.71084418	0.00888002
770448	DESI1	0.65934636	0.0003117
395271	DMBX1	-2.7365372	0.00017366
427004	DNAH3	-2.3586282	0.0011016
420571	DYNC111	1.49516771	0.00367487
395689	ENO2	-1.8681352	0.00049186
421703	EPB41L2	-1.8790429	0.00424831
421703	EPB41L2	-0.8653211	0.00926777
421509	ERO1LB	0.79927548	0.0002771
769188	FAM161A	-1.5780313	0.00090247
415505	FAM174B	0.81170839	0.0002771
771833	FAM194A	-2.432687	0.00657155
424427	FAM20B	0.69560334	0.00396435
416889	FICD	1.00312345	0.00093458
428618	FLRT1	3.93716024	0.00893298
421365	FLVCR1	1.08548101	0.00013067
386747	FMN1	-1.2951485	0.00367487
771133	FUT9	-3.6679303	0.00020872
419770	FXYD2	3.18708386	0.00016312
424171	G6PC2	-1.7674145	0.00037283
417006	GAL3ST1	1.70145792	0.00953958
429501	GALNT6	0.8560541	0.00280289
378781	GH	-2.84771	0.0000139
428397	GHRH-LR	3.97213572	8.06E-07
396533	GOT2	0.6756896	0.0016697
431418	<i>GPR139</i>	-1.484179	0.00103737
100857454	GPX2	2.80083524	0.00037283
422407	GUCY1A3	1.3132422	0.0000634
107055138	HAX1	-1.8224772	0.0000715
395145	HMGCR	0.73169209	0.00154313
423079	HPS5	-2.7970592	0.00010663
100858361	HSD11B2L	1.85096469	0.00010447
395785	HSD17B4	0.68506514	0.00461263
428251	HYOU1	0.82269448	0.00454652
396362	IAPP	-3.7874244	0.00367487
422219	IL13RA2	2.08037281	0.00033948
107053356	INAFM2	1.15517408	0.00505892
419347	KCNG1	1.30521608	0.00027795
427917	KIAA1147	0.64824719	0.00893298
418645	KIAA1324L	1.83865557	7.64E-08
427588	KLF15	-0.9539071	0.00396435
419829	KLHDC8A	1.18600396	0.00057293
424851	KLHL30	0.90227776	0.00676046
395772	KRT7	1.04916276	0.00437386
418840	LACC1	-1.5526333	0.00462991
426779	LETM2	0.78147233	0.00896754

425107	LGALS2	2.37391673	0.00296288
423789	LIPA	-0.977248	0.00296288
426849	LIFA  LMAN1	0.74421571	0.00290288
100857341	LMAN1 LOC100857341	-2.5874059	0.00359958
100857341	LOC100857341 LOC100859804	-2.5562857	0.00339938
100839804	LOC100839804 LOC101749151	2.93828317	0.00016312
101749131	LOC101749131 LOC101750367	2.32214996	0.00220046
101730367	LOC101730367 LOC107049904	7.36511003	0.00220046
107049904	LOC107050309	-3.9016967	0.00628612
107050569	LOC107050569	2.15686607	0.00028012
107050369	LOC107050369	1.05400409	0.00420313
107050717	LOC107050717	1.05400409	0.0000216
107053409	LOC107053409	-7.0048116	0.00000801
107056154	LOC107056154	-1.2099324	0.00351022
417800	LOC417800	2.46484862	0.00462991
418356	LOC418356	3.76747091	0.00628612
422179	LOC422179	-1.5387874	0.0019543
422895	LOC422895	1.98337799	1.38E-15
428451	LOC428451	2.71377612	0.00424831
428971	LOC428971	2.10673556	0.00011139
429955	LOC429955	1.44884673	0.00063875
419533	LOXL2	3.66285514	7.7E-12
424469	LRRC39	-2.333139	0.00381132
101749866	LRTM2	2.50705725	0.0000715
693248	MAF	-1.0821154	0.00687367
419173	MAFB	-1.2095523	0.00291717
421047	MC5R	-1.1187812	0.0016697
420437	MLL3	-0.6682672	0.00436886
420437	MLL3	-0.6682672	0.00436886
395683	MMP13	-3.7433912	0.0031882
395387	MMP9	-2.5485055	5.23E-08
423101	MUC2	-1.7108933	0.00746836
414878	MUC6	-5.8831043	0.00124294
421948	MYCN	1.29181577	0.00094369
417598	NCOR1	-3.6541352	0.00888002
807636	ND1	-1.6545808	0.0006331
430210	NDUFV1	0.83758957	0.00424831
395736	NEDD9	-1.2588805	3.61E-07
396093	NFKBIA	-0.7241225	0.00953958
419697	NIPAL3	0.63982001	0.00557854
422748	NMU	3.59947575	0.00468661
422535	NPNT	-1.0780087	0.0002771
396464	NPY	2.38207228	0.00528824
421746	NT5DC1	1.24861588	0.00005
427914	NT5DC3	-1.3970822	0.00763554
428789	NWD2	2.33924957	0.00070335
422525	OSTC	0.78243341	0.00213222
374091	P4HB	0.95277875	0.0000216

428065	PCDH8	1.72058962	0.00154313
107050625	PCOLCE	0.98943619	0.00134313
429078	PDC	3.17098684	0.00291717
429078	PDIA6	0.76593851	0.00789292
374241	PI15	3.22012014	0.00409047
		1.90953988	2.65E-07
423705	PLA2G12B		
418183	PLEKHA5	-1.5609971	0.0000095
428164	PLTP	-1.3820884	0.00057293
417989	PMM1	0.6991518	0.00896754
422019	PNOC	3.87524835	0.00000407
427605	PSD2	1.12349848	0.00172704
429116	PTGER3	1.26713061	0.00415405
771985	PTPRR	1.82197161	0.0000238
373914	QSOX1	1.21146443	0.00608505
430750	RAB31	-1.0216729	0.00589831
420203	RALYL	-2.3610435	0.00169396
395209	RARRES1	-1.0426794	0.00426344
416507	RASD1	1.92966589	2.29E-07
396107	RET	1.27881441	0.00229095
374105	RIMBP2	2.02082994	0.00005
770339	RP11-26J3.4	5.52485415	0.00000033
396090	RP11-295K3.1	-1.2580618	0.00022682
373919	RUNX2	-2.1708331	0.00628612
419434	SAMD11	1.04337564	0.00033948
426369	SEC61A2	0.68376549	0.00571702
420895	SERPINB6	1.23660884	0.0080927
418651	SHROOM2	-0.9145476	0.00896754
769612	SLC1A4	-1.3967103	0.00016466
427845	SLC26A4	2.10730019	0.0000966
425029	SLC33A1	1.15865888	0.0003178
395185	SLC35B1	1.1279135	0.0000142
107052162	SLC38A7	-1.3452675	0.00063875
107052162	SLC38A7	-0.8653211	0.00926777
430411	SLC39A8	2.15744714	0.00665573
100861584	SLC6A8	1.2343538	3.61E-07
418719	SLC9A2	2.75708953	0.00013067
416550	SLC9A3R2	0.86671721	0.00356272
424862	SLCO2A1	-1.6100793	0.0016697
419051	SLCO2B1	1.54035864	0.00763554
396105	SOX2	-1.5319176	0.0004654
429033	SPEG	0.96717445	0.00367487
423206	SPINT1	1.48255557	3.61E-07
423225	SPTBN5	-2.3843542	0.00063875
420871	SSR1	0.92584722	0.00030165
425656	SSR2	0.80422596	0.00293201
425027	SSR3	0.72481355	0.00405625
107049822	SSR4	0.91298825	0.0013767
771648	SSTR1	1.81140495	0.00576975
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396241	TF	3.19249305	0.00174309
417575	TLCD1	1.08308207	0.0013767
416821	TMED2	0.70931446	0.00292529
424483	TMEM56	1.08237378	0.00313371
395883	TMOD1	-1.9474436	0.00066919
415724	TOX3	-1.0783869	0.00426344
424835	TRPM2	2.51575982	0.0000216
768091	TSC22D3	-1.043332	0.00064229
426419	UNC5A	1.64916428	0.0000216
395582	VAX1	-3.6431957	0.00699024
421702	VNN1	-2.423167	0.00020872
421702	VNN1	-1.5921092	0.0003178
414795	VSIG1	3.06906773	0.00396435
431270	VWA5A	1.97692897	0.00687367
416918	XBP1	1.01818103	0.00057071
771005	XKRX	1.11122284	0.0013767
419759	ZBTB16	-1.1932609	0.00336961
421763	ZBTB24	-1.1212923	0.00547041
107052930	ZFP36L2	-0.9092372	0.0000139
419152	ZNF341	-1.2979584	0.00321418
422017	ZNF395	-1.0349004	0.00279947

**Table 6:** Sex-specific, CORT responsive genes that were differentially expressed in the male gonads

Entrez ID	Gene Name	logFC	FDR
419751	GRIK4	1.12000808	0.00145882

**Table 7:** Differentially expressed genes found in the hypothalamus of both sexes for CORT.

Entrez ID	Gene Name	Female logFC	Female FDR	Male logFC	Male FDR
420570	PDK4	-1.762850788	0.0023829	8 -	0.00000577
378912	RGS2	-1.584808442	0.0000891	-1.9444537	0.0000232

**Table 8:** Differentially expressed genes found in the pituitary of both sexes for CORT.

Entrez ID	Gene Name	Female logFC	Female FDR	Male logFC	Male FDR
419316	APCDD1L	-2.786556117	0.000000219	1.758956886	0.009303519
417431	APOH	-5.673546962	0.000000372	-4.433937462	0.005486274
107052707	CEBPD	-1.631670454	0.00000125	-1.727844466	0.000035
395335	CISH	-1.639177862	0.000000372	-1.696539484	0.0000263
395399	CITED2	-1.381745829	0.000000743	-1.103405016	0.004004957
429929	GADD45B	-1.634815968	0.000000219	-2.1563618	2.67E-09
417931	GAS2L3	-3.701004482	0.006813782	4.700929248	0.000228888
427523	GLDN	-3.097751226	0.0000943	3.293259117	0.000110543
395925	KCNJ5	-1.737522346	0.00000409	-1.921886101	0.000027
100859468	LOC100859468	-0.800572283	0.008487232	-1.146377438	0.000111517
100859605	LOC100859605	-5.750417794	0.0000429	7.526791921	0.00000089
769726	LOC769726	-5.639373015	0.00000115	-5.558226781	0.000420103
770169	LRRN3	0.971597164	0.005818832	1.338240942	0.0000949
428612	OLIG2	-5.520505816	0.0000328	-5.474443141	0.004132952
420570	PDK4	-1.577439264	0.001286217	-2.227524929	0.0000949
420198	PMP2	-7.358868517	0.000231962	7.255651243	0.000528957
417327	PMP22	-2.65744883	0.000628851	4.062040853	0.000000485
429116	PTGER3	-1.988902181	0.000000219	-2.016560884	0.000027
378912	RGS2	-1.809462366	6.74E-09	-1.617696468	0.000027
424038	S100B	-4.309449522	0.000049	3.578834533	0.004132952
421766	SESN1	-0.746193676	0.000918391	-0.743982949	0.009499457
420514	SLC39A12	-4.518647242	0.000620787	-4.682943196	0.005715574
420514	SLC39A12	-2.662794323	0.026980015	-3.222835361	0.036829277
422998	SYT12	-1.296634838	0.000231962	-1.708983675	0.000027
428270	SYT6	-1.198674464	0.000781579	-1.582449835	0.0000689
771074	TTPA	-1.636283666	0.000000538	-1.779655548	0.0000124
420951	VSTM2A	1.155412738	0.0000541	1.346062256	0.0000263
419759	ZBTB16	-1.659919857	0.00000125	-2.30520479	9.47E-09

**Table 9:** Differentially expressed genes found in the gonads of both sexes for CORT.

Entrez ID	GeneName	Female logFC	Female FDR	Male logFC	Male FDR
427387	SEMA6A	-1.686828569	0.00005	1.74357079	0.00810488