

Supplementary Material for

Paternal phthalate exposure-elicited offspring metabolic disorders are associated with altered sperm small RNAs in mice

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Supplemental Table 1-3

Supplemental Figure 1. Uncropped Western blot images.

Supplemental Tale 1. Primer sequences for QPCR

Genes	Forward Primer sequences (5'-3')	Reverse primer sequences(5'-3')
glut2	GGCTAATTTTCAGGACTGGTT	TTTCTTTGCCCTGACTTCCT
glut4	CAGAAGGTGATTGAACAGAG	AATGATGCCAATGAGAAAGG
glut9	CCAATATGGGTACAACGTAGCTG	GCGTCAAGGTGAAGGACTCAATA
tlr8	GAAAACATGCCCCCTCAGTCA	CGTCACAAGGATAGCTTCTGGAA
ccl6	GCTGGCCTCATACAAGAAATGG	GCTTAGGCACCTCTGAACTCTC
ccr1	CTCATGCAGCATAGGAGGCTT	ACATGGCATCACCAAAAATCCA
s100a8	AAATCACCATGCCCTCTACAAG	CCCACTTTTATCACCATCGCAA
socs3	ATGGTCACCCACAGCAAGTTT	TCCAGTAGAATCCGCTCTCCT
hpgd	GTGAACGGCAAAGTGGCTCT	TCCAATCCACCAATGCTACCT
hsd17b6	GGAGCGTGTGGAGACAGAG	GAGGTTCACTTGAAAGATAGGCA
ces1d	AGAGCCCTGGAGCTTCGTG	GAGCACATAGGCGGGTAGGAG
cyp46a1	AGCCGCTATGAGCACATCC	CCATACTTCTTAGCCCAATCCAG
galnt2	GAGGAGGCCCTTTTCATCGC	ACCTTCAAAGCTCTCTGGTAAGA
gapdh	AACTTTGGCATTGTGGAAGG	GGATGCAGGGATGATGTTCT

**Supplemental Table 2. Detailed RNA-seq data of hepatic DEGs
induced by paternal DCHP exposure**

Gene	logFC	PValue	FDR	FC	Gene	logFC	PValue	FDR	FC
<i>Gm21541</i>	6.1584	0.0025	0.0982	71.4248	<i>Selenbp2</i>	2.4367	0.0000	0.0010	5.4141
<i>Pla2g4b</i>	5.3363	0.0007	0.0488	40.4009	<i>Srrm4</i>	2.3779	0.0001	0.0117	5.1980
<i>Klk1</i>	4.9436	0.0000	0.0024	30.7727	<i>Lcn2</i>	2.3586	0.0002	0.0266	5.1287
<i>Ngp</i>	4.7673	0.0005	0.0406	27.2329	<i>Gulp1</i>	2.2790	0.0018	0.0812	4.8533
<i>Fam205a1</i>	4.4598	0.0013	0.0673	22.0052	<i>Ccr1</i>	2.2730	0.0003	0.0276	4.8333
<i>Grip2</i>	4.2877	0.0003	0.0309	19.5306	<i>Btg2</i>	2.2610	0.0000	0.0020	4.7933
<i>Gm49369</i>	4.2749	0.0019	0.0848	19.3589	<i>H2bc9</i>	2.1984	0.0009	0.0556	4.5896
<i>Lrrc69</i>	4.2265	0.0008	0.0544	18.7203	<i>Thsd7a</i>	2.1952	0.0001	0.0172	4.5795
<i>Moxd1</i>	4.1776	0.0009	0.0552	18.0960	<i>Mmp7</i>	2.1660	0.0001	0.0167	4.4879
<i>Sh2d1b1</i>	4.1291	0.0018	0.0812	17.4980	<i>Hcar2</i>	2.1628	0.0004	0.0332	4.4777
<i>Shisal1</i>	4.1172	0.0006	0.0454	17.3539	<i>Dhrs9</i>	2.1619	0.0001	0.0127	4.4750
<i>Adra2a</i>	4.0640	0.0007	0.0488	16.7256	<i>Prokr1</i>	2.1378	0.0017	0.0801	4.4010
<i>Dmrt2</i>	4.0557	0.0007	0.0485	16.6295	<i>Ly6d</i>	2.1182	0.0016	0.0755	4.3415
<i>Actl9</i>	4.0478	0.0013	0.0682	16.5395	<i>Dusp8</i>	2.0451	0.0000	0.0027	4.1270
<i>Gipc2</i>	3.9476	0.0001	0.0162	15.4297	<i>Chrm3</i>	2.0060	0.0000	0.0000	4.0167
<i>Capn9</i>	3.5745	0.0018	0.0812	11.9130	<i>Serpina5</i>	1.9527	0.0000	0.0102	3.8710
<i>Myom3</i>	3.4259	0.0001	0.0123	10.7476	<i>Atf3</i>	1.9384	0.0000	0.0052	3.8329
<i>Egr2</i>	3.4209	0.0016	0.0783	10.7100	<i>Mcf2l</i>	1.9204	0.0023	0.0956	3.7852
<i>Cd247</i>	3.3421	0.0002	0.0248	10.1407	<i>Tmem156</i>	1.8908	0.0001	0.0126	3.7085
<i>Mmp8</i>	3.2537	0.0010	0.0613	9.5378	<i>Serpina1e</i>	1.8735	0.0001	0.0160	3.6643
<i>Sult1e1</i>	3.2363	0.0014	0.0692	9.4239	<i>Fam222a</i>	1.8664	0.0000	0.0070	3.6463
<i>Saa2</i>	3.2276	0.0003	0.0309	9.3670	<i>S100a9</i>	1.8654	0.0003	0.0306	3.6437
<i>Fos</i>	3.2078	0.0002	0.0260	9.2393	<i>Scn3a</i>	1.8256	0.0004	0.0353	3.5446
<i>Gm20422</i>	3.1865	0.0002	0.0235	9.1041	<i>Syn1</i>	1.7870	0.0004	0.0362	3.4510
<i>Egr1</i>	3.1185	0.0001	0.0160	8.6846	<i>Mup8</i>	1.7404	0.0005	0.0383	3.3414
<i>Cxcl1</i>	3.0568	0.0000	0.0064	8.3210	<i>Prkcb</i>	1.7199	0.0009	0.0566	3.2942
<i>Tchh</i>	3.0085	0.0000	0.0005	8.0472	<i>Nr4a3</i>	1.6975	0.0025	0.0987	3.2435
<i>S100a8</i>	2.9737	0.0000	0.0052	7.8556	<i>Slc37a1</i>	1.6974	0.0000	0.0030	3.2431
<i>Saa1</i>	2.9241	0.0002	0.0197	7.5897	<i>9930111J21Rik1</i>	1.6970	0.0022	0.0934	3.2422
<i>Ckap2</i>	2.8844	0.0001	0.0184	7.3838	<i>E030018B13Rik</i>	1.6444	0.0003	0.0296	3.1261
<i>Tff3</i>	2.8463	0.0003	0.0296	7.1915	<i>Tlr8</i>	1.6286	0.0001	0.0190	3.0922
<i>Ugt2b37</i>	2.7411	0.0000	0.0025	6.6857	<i>1700017B05Rik</i>	1.6186	0.0000	0.0009	3.0708
<i>Btd19</i>	2.6922	0.0004	0.0345	6.4628	<i>Mt2</i>	1.6173	0.0000	0.0073	3.0680
<i>44807</i>	2.6846	0.0025	0.0979	6.4288	<i>Abcb1b</i>	1.6159	0.0000	0.0002	3.0651
<i>Epb41l3</i>	2.6716	0.0001	0.0120	6.3713	<i>Fmn2</i>	1.5882	0.0000	0.0102	3.0067
<i>Scara5</i>	2.5991	0.0000	0.0000	6.0591	<i>Ccdc120</i>	1.5620	0.0010	0.0589	2.9527
<i>Adcy1</i>	2.5949	0.0000	0.0086	6.0415	<i>Vmn2r124</i>	1.5559	0.0020	0.0884	2.9402
<i>Fosb</i>	2.5905	0.0004	0.0345	6.0229	<i>Bdkrb2</i>	1.5541	0.0014	0.0702	2.9365
<i>F13a1</i>	2.5133	0.0019	0.0848	5.7092	<i>Socs3</i>	1.5425	0.0001	0.0136	2.9129
<i>Myc</i>	2.4852	0.0009	0.0555	5.5992	<i>Fst</i>	1.5335	0.0020	0.0871	2.8949

Gene	logFC	PValue	FDR	FC	Gene	logFC	PValue	FDR	FC
<i>Igfbp1</i>	1.5218	0.0013	0.0675	2.8716	<i>Fgl1</i>	1.0213	0.0000	0.0069	2.0297
<i>Steap4</i>	1.5050	0.0000	0.0096	2.8382	<i>Atp11a</i>	1.0016	0.0019	0.0833	2.0022
<i>Aspm</i>	1.5002	0.0000	0.0044	2.8289	<i>Serpina3n</i>	0.9912	0.0003	0.0309	1.9879
<i>Pkib</i>	1.4820	0.0002	0.0242	2.7934	<i>Rasgef1b</i>	0.9841	0.0001	0.0177	1.9780
<i>Cd14</i>	1.4766	0.0000	0.0006	2.7828	<i>Slc8a1</i>	0.9681	0.0008	0.0539	1.9562
<i>Galnt3</i>	1.4385	0.0020	0.0872	2.7104	<i>Acmsd</i>	0.9638	0.0017	0.0804	1.9504
<i>Bmper</i>	1.4061	0.0017	0.0788	2.6502	<i>Cyp26b1</i>	0.9626	0.0006	0.0424	1.9488
<i>E2f8</i>	1.3474	0.0000	0.0024	2.5446	<i>Rsad2</i>	0.9227	0.0002	0.0242	1.8957
<i>Thbs1</i>	1.3466	0.0008	0.0518	2.5431	<i>Fgfr1</i>	0.9131	0.0004	0.0347	1.8831
<i>Tnfaip3</i>	1.3187	0.0003	0.0309	2.4945	<i>C9orf72</i>	0.9064	0.0003	0.0292	1.8744
<i>Junb</i>	1.3184	0.0013	0.0675	2.4939	<i>Cnbd2</i>	0.8981	0.0016	0.0755	1.8637
<i>Cytip</i>	1.2802	0.0003	0.0274	2.4288	<i>Btg3</i>	0.8914	0.0013	0.0687	1.8549
<i>Pdk4</i>	1.2680	0.0014	0.0697	2.4083	<i>Col4a1</i>	0.8877	0.0000	0.0000	1.8502
<i>Agap2</i>	1.2558	0.0000	0.0004	2.3880	<i>Cyb561</i>	0.8859	0.0001	0.0160	1.8480
<i>Itgam</i>	1.2532	0.0022	0.0921	2.3837	<i>Cd300a</i>	0.8819	0.0004	0.0362	1.8428
<i>Plk3</i>	1.2492	0.0022	0.0914	2.3771	<i>Cep290</i>	0.8794	0.0009	0.0549	1.8396
<i>Mt1</i>	1.2491	0.0010	0.0613	2.3770	<i>C6</i>	0.8768	0.0000	0.0017	1.8363
<i>Arid5a</i>	1.2415	0.0008	0.0526	2.3644	<i>Slc6a8</i>	0.8705	0.0001	0.0120	1.8282
<i>Ccna2</i>	1.2153	0.0008	0.0541	2.3218	<i>Kctd17</i>	0.8646	0.0000	0.0069	1.8209
<i>Nnumt</i>	1.1767	0.0003	0.0276	2.2606	<i>Retreg1</i>	0.8595	0.0000	0.0052	1.8145
<i>Ercc6l2</i>	1.1738	0.0001	0.0169	2.2560	<i>Egfr</i>	0.8583	0.0015	0.0755	1.8129
<i>Tlr13</i>	1.1692	0.0001	0.0194	2.2488	<i>Cntnap1</i>	0.8474	0.0008	0.0536	1.7993
<i>Slc3a1</i>	1.1687	0.0014	0.0700	2.2481	<i>Smpd3</i>	0.8388	0.0018	0.0812	1.7885
<i>Cd163</i>	1.1658	0.0007	0.0511	2.2436	<i>Mpzl1</i>	0.8324	0.0009	0.0552	1.7807
<i>Ccl6</i>	1.1555	0.0000	0.0010	2.2276	<i>Stat3</i>	0.8315	0.0000	0.0015	1.7796
<i>Ikzf4</i>	1.1553	0.0008	0.0518	2.2274	<i>Arl13b</i>	0.8045	0.0000	0.0061	1.7465
<i>Slc41a2</i>	1.1536	0.0006	0.0425	2.2247	<i>Zbtb21</i>	0.8032	0.0000	0.0082	1.7450
<i>Cldn14</i>	1.1474	0.0007	0.0481	2.2151	<i>Sla</i>	0.7981	0.0025	0.0984	1.7388
<i>Dock11</i>	1.1307	0.0011	0.0616	2.1897	<i>Serpina3c</i>	0.7889	0.0002	0.0242	1.7278
<i>Kif24</i>	1.0983	0.0022	0.0914	2.1410	<i>Nin</i>	0.7886	0.0006	0.0427	1.7274
<i>Map3k6</i>	1.0977	0.0011	0.0638	2.1401	<i>Zfp281</i>	0.7871	0.0000	0.0084	1.7257
<i>P2ry13</i>	1.0920	0.0018	0.0812	2.1316	<i>Fbn1</i>	0.7854	0.0005	0.0405	1.7235
<i>Fndc3b</i>	1.0910	0.0000	0.0000	2.1303	<i>Golm1</i>	0.7811	0.0022	0.0914	1.7184
<i>Grem2</i>	1.0706	0.0003	0.0274	2.1003	<i>Tubb2a</i>	0.7801	0.0001	0.0177	1.7173
<i>Emilin2</i>	1.0573	0.0010	0.0612	2.0810	<i>Nlrp12</i>	0.7779	0.0003	0.0292	1.7146
<i>Fosl2</i>	1.0512	0.0000	0.0104	2.0723	<i>Atg16l2</i>	0.7736	0.0000	0.0104	1.7096
<i>Cd207</i>	1.0455	0.0017	0.0788	2.0641	<i>Tanc2</i>	0.7733	0.0002	0.0266	1.7092
<i>Csf2rb2</i>	1.0417	0.0013	0.0673	2.0587	<i>Lrfn3</i>	0.7710	0.0003	0.0297	1.7065
<i>Klf6</i>	1.0321	0.0000	0.0009	2.0450	<i>Fbfl</i>	0.7709	0.0011	0.0629	1.7064
<i>Grhl1</i>	1.0308	0.0015	0.0744	2.0431	<i>Ccnl1</i>	0.7672	0.0007	0.0488	1.7020
<i>Slc41a3</i>	1.0284	0.0000	0.0084	2.0397	<i>Entpd1</i>	0.7659	0.0005	0.0376	1.7004

Gene	logFC	PValue	FDR	FC	Gene	logFC	PValue	FDR	FC
<i>Nedd9</i>	0.7576	0.0000	0.0063	1.6907	<i>Olfir1033</i>	0.6555	0.0000	0.0052	1.5751
<i>Lrg1</i>	0.7554	0.0026	0.0995	1.6880	<i>Fam124a</i>	0.6512	0.0004	0.0345	1.5704
<i>Gjc3</i>	0.7536	0.0025	0.0989	1.6860	<i>Gfra1</i>	0.6490	0.0001	0.0144	1.5681
<i>Rab30</i>	0.7530	0.0000	0.0017	1.6853	<i>Ahcyl2</i>	0.6475	0.0000	0.0052	1.5664
<i>Pla2g7</i>	0.7514	0.0014	0.0711	1.6834	<i>Acsl4</i>	0.6449	0.0000	0.0073	1.5636
<i>Cd93</i>	0.7480	0.0007	0.0497	1.6794	<i>Garem1</i>	0.6371	0.0000	0.0002	1.5552
<i>Slc16a6</i>	0.7475	0.0000	0.0075	1.6788	<i>Elk4</i>	0.6357	0.0000	0.0007	1.5537
<i>Rel</i>	0.7463	0.0000	0.0070	1.6775	<i>Hspb8</i>	0.6295	0.0003	0.0309	1.5470
<i>Tsc22d2</i>	0.7445	0.0006	0.0469	1.6754	<i>Synpo</i>	0.6287	0.0018	0.0812	1.5461
<i>C8b</i>	0.7404	0.0026	0.0996	1.6707	<i>Desi2</i>	0.6281	0.0000	0.0061	1.5455
<i>Anxa1</i>	0.7375	0.0019	0.0833	1.6673	<i>Snx10</i>	0.6275	0.0004	0.0332	1.5449
<i>B4galt6</i>	0.7314	0.0006	0.0424	1.6603	<i>Dst</i>	0.6269	0.0000	0.0061	1.5442
<i>B4galt4</i>	0.7298	0.0024	0.0976	1.6584	<i>Ano6</i>	0.6224	0.0016	0.0779	1.5394
<i>Mbnl2</i>	0.7262	0.0001	0.0165	1.6542	<i>Ttpal</i>	0.6167	0.0003	0.0296	1.5334
<i>Olfir344</i>	0.7196	0.0003	0.0296	1.6467	<i>Mlxip</i>	0.6157	0.0010	0.0613	1.5323
<i>Rell1</i>	0.7135	0.0023	0.0950	1.6398	<i>Apobec1</i>	0.6135	0.0001	0.0136	1.5299
<i>Lad1</i>	0.7107	0.0006	0.0424	1.6365	<i>Mical2</i>	0.6123	0.0000	0.0010	1.5287
<i>Bcl3</i>	0.7060	0.0012	0.0646	1.6313	<i>Flna</i>	0.6119	0.0024	0.0960	1.5283
<i>Skil</i>	0.7008	0.0000	0.0022	1.6254	<i>Col4a2</i>	0.6104	0.0000	0.0000	1.5267
<i>Rgs2</i>	0.6980	0.0010	0.0595	1.6223	<i>Onecut2</i>	0.6089	0.0000	0.0015	1.5251
<i>Slc25a22</i>	0.6870	0.0004	0.0351	1.6100	<i>Stk17b</i>	0.6059	0.0027	0.0998	1.5219
<i>Apcs</i>	0.6857	0.0002	0.0204	1.6085	<i>Gldc</i>	0.6057	0.0000	0.0009	1.5217
<i>Neu3</i>	0.6852	0.0013	0.0673	1.6080	<i>Fabp5</i>	0.6053	0.0018	0.0812	1.5213
<i>Slc41a1</i>	0.6771	0.0023	0.0950	1.5990	<i>Nedd4l</i>	0.6049	0.0005	0.0373	1.5208
<i>Myh10</i>	0.6760	0.0000	0.0017	1.5977	<i>Cyp4a12b</i>	0.6000	0.0001	0.0119	1.5157
<i>Insig2</i>	0.6698	0.0000	0.0052	1.5909	<i>Ptp4a1</i>	0.5998	0.0009	0.0552	1.5155
<i>Dgkh</i>	0.6682	0.0000	0.0052	1.5891	<i>Sh3pxd2a</i>	0.5915	0.0012	0.0646	1.5068
<i>Col12a1</i>	0.6619	0.0023	0.0938	1.5822	<i>Msr1</i>	0.5900	0.0017	0.0805	1.5053
<i>Fam120c</i>	0.6609	0.0003	0.0316	1.5810	<i>Clpx</i>	0.5881	0.0015	0.0726	1.5032
<i>Setd7</i>	0.6597	0.0001	0.0127	1.5797	<i>Tanc1</i>	0.5866	0.0002	0.0197	1.5017
<i>Eppk1</i>	0.6592	0.0000	0.0039	1.5792	<i>Wnk1</i>	0.5864	0.0004	0.0365	1.5015
<i>Fyb2</i>	0.6590	0.0012	0.0667	1.5789					
<i>Tor3a</i>	0.6560	0.0022	0.0921	1.5757					
<i>Cntrl</i>	0.6555	0.0000	0.0005	1.5752					

Gene	logFC	PValue	FDR	FC	Gene	logFC	PValue	FDR	FC
<i>Gm20388</i>	-9.4576	0.0001	0.0193	0.0014	<i>D130043K22Rik</i>	-0.8995	0.0012	0.0646	0.5361
<i>Olfir1565</i>	-6.8619	0.0000	0.0024	0.0086	<i>Purg</i>	-0.8973	0.0016	0.0777	0.5369
<i>Cphx3</i>	-6.7902	0.0010	0.0613	0.0090	<i>Izumo4</i>	-0.8815	0.0007	0.0488	0.5428
<i>BC035947</i>	-6.5240	0.0002	0.0205	0.0109	<i>Mid1ip1</i>	-0.8733	0.0025	0.0983	0.5459
<i>Vmn1r53</i>	-4.4005	0.0004	0.0345	0.0474	<i>Dyrk3</i>	-0.8726	0.0015	0.0720	0.5461
<i>Noxa1</i>	-3.9605	0.0009	0.0552	0.0642	<i>Adamts7</i>	-0.8606	0.0002	0.0203	0.5507
<i>Lrrc71</i>	-3.2579	0.0009	0.0570	0.1045	<i>Sult1c2</i>	-0.8566	0.0002	0.0242	0.5523
<i>4930513O06Rik</i>	-2.5169	0.0001	0.0119	0.1747	<i>Ces1d</i>	-0.8507	0.0001	0.0120	0.5545
<i>Hao2</i>	-1.7975	0.0022	0.0914	0.2877	<i>Lrit2</i>	-0.8387	0.0000	0.0017	0.5591
<i>Ms4a12</i>	-1.7914	0.0014	0.0711	0.2889	<i>Cyp26a1</i>	-0.8008	0.0000	0.0020	0.5740
<i>Cnmd</i>	-1.6905	0.0000	0.0052	0.3098	<i>Kcnk5</i>	-0.7871	0.0018	0.0812	0.5795
<i>Hamp2</i>	-1.6859	0.0000	0.0002	0.3108	<i>Impg2</i>	-0.7713	0.0000	0.0102	0.5859
<i>Dsg1c</i>	-1.6295	0.0000	0.0000	0.3232	<i>Gas1</i>	-0.7483	0.0001	0.0109	0.5953
<i>Myen</i>	-1.5707	0.0006	0.0460	0.3366	<i>Nr1i3</i>	-0.7267	0.0000	0.0104	0.6043
<i>Lrrc15</i>	-1.5212	0.0000	0.0009	0.3484	<i>Gstt2</i>	-0.7180	0.0010	0.0610	0.6079
<i>Acot3</i>	-1.3758	0.0004	0.0367	0.3853	<i>1810058I24Rik</i>	-0.7146	0.0001	0.0144	0.6094
<i>Nat8f7</i>	-1.3416	0.0002	0.0245	0.3946	<i>Dbp</i>	-0.6854	0.0005	0.0408	0.6218
<i>Nr0b2</i>	-1.1858	0.0015	0.0735	0.4396	<i>Hpgd</i>	-0.6723	0.0000	0.0015	0.6275
<i>Slc6a16</i>	-1.1068	0.0007	0.0474	0.4643	<i>Akr1c19</i>	-0.6702	0.0000	0.0001	0.6284
<i>Serpina6</i>	-1.0795	0.0000	0.0000	0.4732	<i>4930579F01Rik</i>	-0.6599	0.0002	0.0250	0.6329
<i>Inmt</i>	-1.0789	0.0000	0.0003	0.4734	<i>Syt3</i>	-0.6535	0.0017	0.0800	0.6357
<i>Serpinb1a</i>	-1.0587	0.0013	0.0684	0.4800	<i>Fdft1</i>	-0.6498	0.0000	0.0061	0.6374
<i>Tmem138</i>	-1.0231	0.0022	0.0934	0.4920	<i>Tk1</i>	-0.6428	0.0001	0.0160	0.6404
<i>Car1</i>	-1.0204	0.0001	0.0136	0.4930	<i>Aifm3</i>	-0.6228	0.0005	0.0410	0.6494
<i>Cyp46a1</i>	-0.9969	0.0003	0.0292	0.5011	<i>Pnpla1</i>	-0.6181	0.0024	0.0968	0.6515
<i>D930048N14Rik</i>	-0.9904	0.0008	0.0517	0.5033	<i>Zfp606</i>	-0.6044	0.0021	0.0896	0.6578
<i>Delk3</i>	-0.9711	0.0001	0.0166	0.5101	<i>Ak2</i>	-0.6023	0.0000	0.0016	0.6587
<i>Cyp2a5</i>	-0.9581	0.0000	0.0000	0.5147	<i>Car3</i>	-0.5993	0.0004	0.0365	0.6601
<i>Slco1a4</i>	-0.9333	0.0000	0.0015	0.5237	<i>Zfp467</i>	-0.5983	0.0005	0.0420	0.6605
<i>Hsd17b6</i>	-0.9171	0.0002	0.0197	0.5296	<i>Slc2a5</i>	-0.5953	0.0016	0.0783	0.6619
<i>Map2k6</i>	-0.9136	0.0006	0.0444	0.5308	<i>Haus4</i>	-0.5912	0.0000	0.0073	0.6638

FC: Fold Change; FDR: False Discovery rate

Supplemental Table 3. PANDORA-seq detects significantly changed sperm rsRNAs and tsRNAs induced by DCHP exposure

Sequence	Length	Annotation	fold_change	q_value (%)
TTCGTACATCTAGGAGCTATAGAACTAGTACCGCAAGGGAAAG	43	16S-rRNA	2.5011	7.7906
TTCTTAGTTGGTGGAG	16	18S-rRNA	2.0982	0.0000
TCTTAGTTGGTGGAG	15	18S-rRNA	2.1913	0.0000
TTTGGTGACTCTAGATAACCTCGGGCCGATCGCACGCCCC	40	18S-rRNA	2.0205	5.8429
TTAGTTGGTGGAGCGAT	17	18S-rRNA	2.3755	5.8429
GGTTAATTCCGATAACGAACGAGACTCTGGCATGCTAACTAGT	43	18S-rRNA	2.5590	5.8429
TTAGTTGGTGGAGCGATTTGTCTGGTTAATTCCGATAACGAACG	44	18S-rRNA	2.1973	7.7906
GTCTGGTTAATTCCGATAACGAACGAGACTCTGGCATGCTAAC	43	18S-rRNA	2.1106	7.7906
TGGTTAATTCCGATAACGAACGAGACTCTGGCATGCTAACTAG	43	18S-rRNA	2.5648	7.7906
TCTTAGTTGGTGGAGCGATTTGTCTGGTTAATTCCGATAACGAA	44	18S-rRNA	2.7403	7.7906
AGACGGACCAGAGCGAAAGCATTGCAAGAATGTTTCATTAAT	45	18S-rRNA	2.0833	8.1270
TCTTAGTTGGTGGAGCGAT	19	18S-rRNA	2.1012	8.1270
TTAGTTGGTGGAGCGATTTGTCTGGTTAATTCCGATAACGAA	42	18S-rRNA	2.8972	8.1270
CTTAGTTGGTGGAGCGAT	18	18S-rRNA	2.3625	8.1270
TGGTTAATTCCGATAACGAACGAGACTCTGGCATGCTAACTAGT	44	18S-rRNA	2.1005	8.1270
GGGGCGGGGGGCCGGA	17	28S-rRNA	11.1189	0.0000
GTGTGGAACCTGGCGCTAAACCATTCTGTAGACGACCTGCTT	41	28S-rRNA	2.0208	0.0000
ATTCAAACGAGAACTTTGAAGGCCGAAGTGGAGAAGGGTTCCA	43	28S-rRNA	2.3532	0.0000
TGGCGACCCGCTGAA	15	28S-rRNA	2.2478	5.8429
TGGCGTGGAGCCGGGC	16	28S-rRNA	9.6442	5.8429
TCCTCCCACCCCTC	15	28S-rRNA	3.0462	7.7906
GCAAATCGGTTCGTCGACCTGGGTATAGGGGCGAAAGAC	39	28S-rRNA	2.0118	7.7906
CTCGCTGCGATCTATTGAAAGTCAGCCCTCGACACAAGGGT	41	28S-rRNA	2.0725	7.7906
GATTTCTGCCAGTGCTCTGAATGTCAAAGTGAAGAAATCAAT	44	28S-rRNA	2.9102	7.7906
AATTAGTGACGCGCATGAATGGATGAACGAGATTCCCAC	39	28S-rRNA	2.0365	7.7906
ACGTTGAACGCACGTTTCGTGTGGAACCTGGCGCTAAACCATTCTG	44	28S-rRNA	2.3707	7.7906
AGACGACCTGCTTCTGGGTCGGGGTTTCGTACGTAGCAGAGCAG	44	28S-rRNA	2.3127	7.7906
GTGTGGAACCTGGCGCTAGACCAT	24	28S-rRNA	3.4860	7.7906
GTGTGGAACCTGGCGCTAAACCAT	24	28S-rRNA	2.4817	7.7906
GAGCCAATGGGGCGAAGCTACCATCTGTGGATTATGACTGAA	43	28S-rRNA	2.3690	7.7906
TGAAACACGGACCAAGGAGTCTAACGCGTGC GCGAGTCAGGGGCT	45	28S-rRNA	2.8513	7.7906
ATTCAAACGAGAACTTG	18	28S-rRNA	2.5514	7.7906

GTTGAACGCACGTTTCGTGTGGAACCTGGCGCTAAACCATTTCG	42	28S-rRNA	2.2064	7.7906
GTGTGGAACCTGGCGCTAAACCATTTCGTAGACGACCTGCT	40	28S-rRNA	2.0488	7.7906
GGGGGACCGTCGGT	15	28S-rRNA	4.0398	7.7906
ACGTTTCGTGTGGAAC	15	28S-rRNA	2.6031	8.1270
GAAACACGGACCAAGGAGTCTAACGCGTGCGGAGTCAGGGGCT	44	28S-rRNA	2.7348	8.1270
TTGACTCTAGTCTGGCACGGTGAAGAGACATGAGAGGTGTAGAA	44	28S-rRNA	3.0585	8.1270
CGCGACCTCAGATCAGA	17	28S-rRNA	2.2721	8.1270
TGGAGCACGAGCGTACGCGTTAGGACCCGAAAGATGGTGAA	41	28S-rRNA	2.6925	8.1270
TAGACGACCTGCTTCTGGGTCGGGGTTTCGTACGTAGCAGAGCAG	45	28S-rRNA	2.0220	8.1270
AGGACGGTGGCCATGGAAGTCGGAATCCGCTAAGGAGTGTGTAA	44	28S-rRNA	2.6189	8.1270
ACGTTTCGTGTGGAACCTGGCGCTAAACCAT	30	28S-rRNA	2.1311	8.1270
CGCGACCTCAGATCAGACGTGGCGACCCGCTGAATTTAAGCATA	44	28S-rRNA	2.1629	8.1270
GGAGCACGAGCGTACGCGTTAGGACCCGAAAGATGGTGAA	40	28S-rRNA	2.2785	8.1270
GAGCCAATGGGGCGAAGCTACCATCTGTGGGATTATGACTGAACG	45	28S-rRNA	2.4328	8.1270
ATCCTTCGATGTGGCTCTTCCTATCATTGTGAAGCAGAATTCAC	45	28S-rRNA	2.7807	8.1270
AGCCGACTTAGAACTGGTGCGGACCAGGGGAATCCGACTGTC	42	28S-rRNA	2.0335	8.1270
AACCGACTTAGAACTGGTGCGGACCAGGGGAATCCGACTGTT	42	28S-rRNA	2.2615	8.1270
CGCGACCTCAGATCAG	16	28S-rRNA	2.2767	8.1270
AAACGAGAACTTTGAA	16	28S-rRNA	3.5657	8.1270
ATTAGTGACGCGCATGAATGGATGAACGAGATTCCCAC	38	28S-rRNA	2.2235	8.1270
AGCCGACTCAGAACTGGTGCGGACCAGGGGAATCCGACTGTT	42	28S-rRNA	2.1549	8.1270
TGGGCCACTTTTGGTAAGCAGAACTGGCGCTGCGGGATGAA	41	28S-rRNA	2.6329	8.1270
AGGACACATTGATCATCGACACTTCGAACGCACTTGCGGCCCG	44	5.8S-rRNA	2.0234	8.1270
AAAAACATTAGACTGTGAATCTGACAACAGGAAATAAACCTCCTT	45	mature-mt_tRNA-His-GTG	4.6325	0.0000
AAAAACATTAGACTGTGAATCTGACAACAGGAAATAAACCTCCTT	44	mature-mt_tRNA-His-GTG	4.9751	0.0000
AAAAACATTAGACTGTGAATCTGACAACAGGAAATAAACCTCCT	43	mature-mt_tRNA-His-GTG	4.8024	5.8429
AAAAACATTAGACTGTGAATCTGACAACAGGAAATAAACCTCCTTA	45	mature-mt_tRNA-His-GTG	4.1089	5.8429
AAACATTAGACTGTGAATCTGACAACAGGAAATAAACCTCCTTA	44	mature-mt_tRNA-His-GTG	5.1753	5.8429
AAAAACATTAGACTGTGAATCTGACAACAGGAAATAAACCTCCT	44	mature-mt_tRNA-His-GTG	5.2256	7.7906
AAACATTAGACTGTGAATCTGACAACAGGAAATAAACCTCCT	42	mature-mt_tRNA-His-GTG	4.7049	7.7906
AAACATTAGACTGTGAATCTGACAACAGGAAATAAACCTCCTT	43	mature-mt_tRNA-His-GTG	5.3681	7.7906
TAGACTGTGAATCTGACAACAGGAAATAAACCTCCTTATTCACCC	45	mature-mt_tRNA-His-GTG	4.1905	7.7906
CAAAAAACATTAGACTGTGAATCTGACAACAGGAAATAAACCTCC	45	mature-mt_tRNA-His-GTG	5.0375	8.1270
AGTTTACAAAAACATTAGACTGTGAATCTGACAACAGG	39	mature-mt_tRNA-His-GTG	4.9983	8.1270
AAGGCATTGGCCTCCTAAGCCAGGGATTGTGGGTT	35	mature-tRNA-Arg-CCT	2.3384	7.7906

AAGGCACTGGCCTCCTAAGCCAGGGATTGTGGGTT	35	mature-tRNA-Arg-CCT	2.2728	7.7906
ATTGGCCTCCTAAGCCAGGGATTGTGGGTT	30	mature-tRNA-Arg-CCT	3.3051	8.1270
GCATTGGTGGTTCAGTGGTAGAAT	24	mature-tRNA-Gly-GCC_5_end;mature-tRNA-Gly-CCC_5_end	2.8288	8.1270
GGTAGCGTGGCCGAG	15	mature-tRNA-Leu-AAG_5_end;mature-tRNA-Leu-TAG_5_end	5.5337	0.0000
GGTAGCGTGGCTGAG	15	mature-tRNA-Leu-AAG_5_end;mature-tRNA-Leu-TAG_5_end	3.0582	8.1270

Supplemental Figure 1. Uncropped Western blot images

