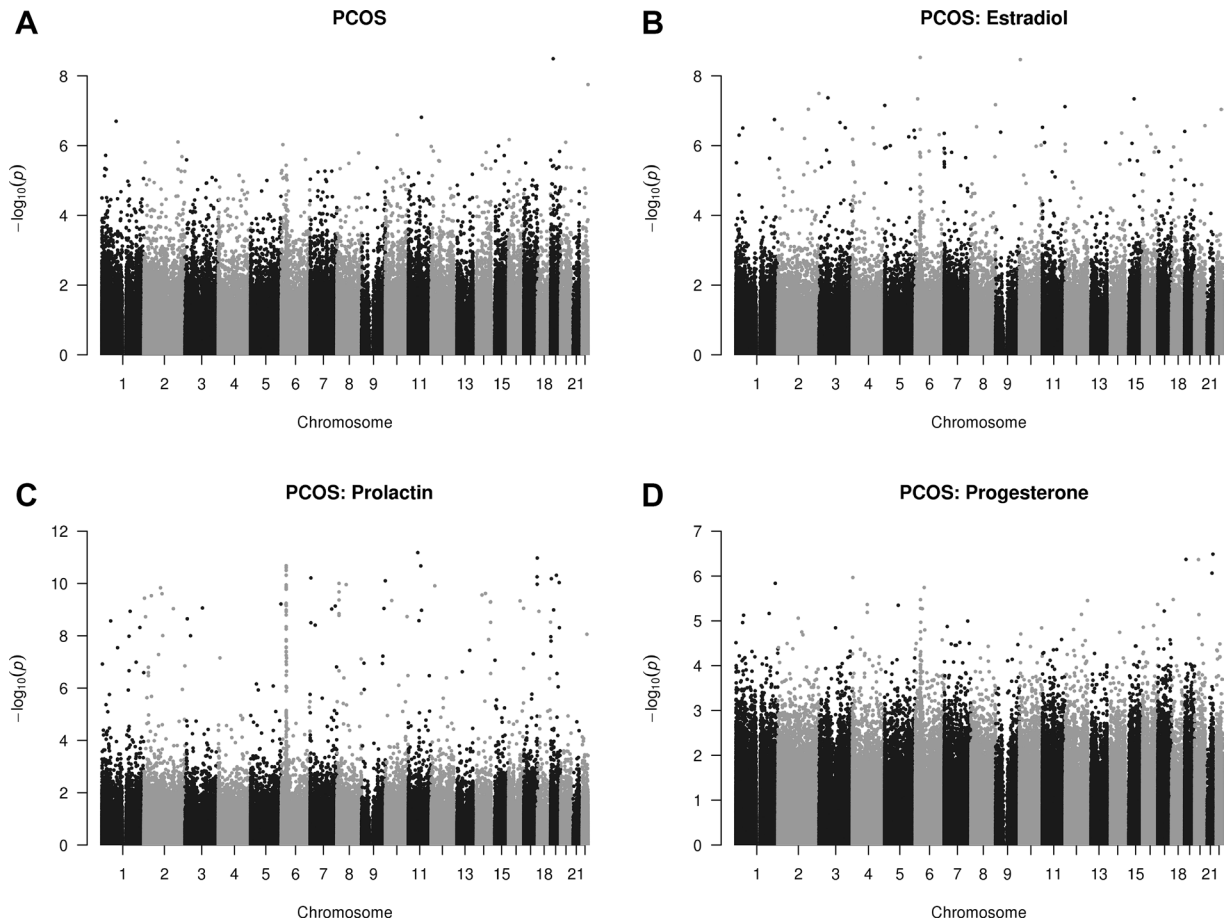
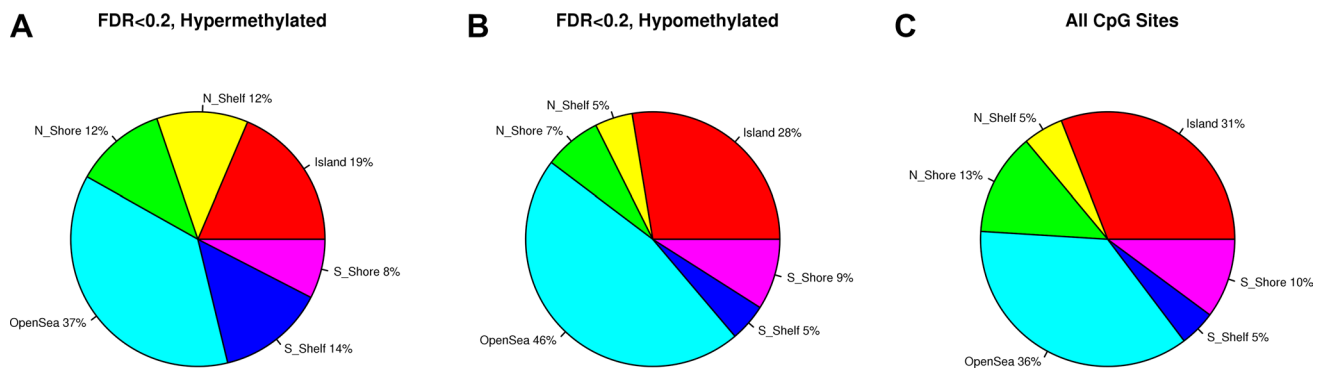


Differential DNA methylation patterns of polycystic ovarian syndrome in whole blood of Chinese women

Supplementary Materials



Supplementary Figure S1: Manhattan plots for the negative log₁₀-transformed p values from EWAS on PCOS (A), and EWAS in PCOS patients on E2 (B), prolactin (C) and progesterone (D) plotted against genomic location (Mb) for each CpG. The distinct pattern for prolactin on chromosome 6 is further displayed by a chromosome-wise Manhattan plot in Figure 2.



Supplementary Figure S2: Pie plots for the distribution of CpGs associated with PCOS status for hypermethylated (A), hypomethylated (B) CpGs with FDR < 0.2, and for all CpGs analysed on the array (C).

Supplementary Table S1: CpGs associated with PCOS

CPG	meanPcos	meanControl	Diff	pval	qval	chr	pos
cg23647968	0.847061568	0.820176263	0.026885304	3.22E-09	0.001471148	chr19	15051936
cg09456760	0.755388715	0.717660252	0.037728463	1.77E-08	0.004043544	chr22	51206645
cg03197935	0.913973672	0.887855623	0.026118049	1.54E-07	0.022869	chr11	77885410
cg10827434	0.698378549	0.668805774	0.029572774	2.01E-07	0.022869	chr1	84944976
cg07921144	0.777264189	0.799479219	-0.022215029	4.95E-07	0.043882351	chr10	70184359
cg04737885	0.87137745	0.815687391	0.055690059	6.76E-07	0.043882351	chr16	4014095
cg08123608	0.830746535	0.811007865	0.01973867	7.88E-07	0.043882351	chr2	201927099
cg19110428	0.622633757	0.569931651	0.052702105	8.02E-07	0.043882351	chr20	30324912
cg01679528	0.660663744	0.634123913	0.026539831	9.37E-07	0.043882351	chr6	10430966
cg06030190	0.151441802	0.168791335	-0.017349534	1.02E-06	0.043882351	chr15	43029558
cg20454537	0.850726081	0.826026481	0.0246996	1.06E-06	0.043882351	chr12	822286
cg21472448	0.715554946	0.75283076	-0.037275814	1.43E-06	0.046226847	chr12	13156131
cg00703849	0.813809	0.775001563	0.038807437	1.47E-06	0.046226847	chr19	53229766
cg04224092	0.909150343	0.888050429	0.021099914	1.56E-06	0.046226847	chr14	77247777
cg12154749	0.766643613	0.791216125	-0.024572511	1.59E-06	0.046226847	chrX	103176599
cg17820495	0.59077952	0.627429481	-0.036649962	1.62E-06	0.046226847	chr8	128844842
cg00165619	0.623362646	0.655355831	-0.031993185	1.91E-06	0.048820546	chr1	22903087
cg24133724	0.590950244	0.61122771	-0.020277466	1.93E-06	0.048820546	chr15	77271602
cg13131061	0.79096052	0.766329313	0.024631207	2.07E-06	0.049605365	chr2	225268095
cg18368637	0.626520673	0.657858413	-0.031337741	2.49E-06	0.0497538	chr6	144179905
cg04475307	0.817303343	0.777831685	0.039471658	2.56E-06	0.0497538	chr3	9694905
cg18341969	0.138039172	0.1628806	-0.024841428	2.61E-06	0.0497538	chr19	571802
cg25928510	0.852539891	0.840073508	0.012466383	2.70E-06	0.0497538	chr12	45749440
cg07359604	0.74746872	0.762160862	-0.014692142	2.76E-06	0.0497538	chr15	25415763
cg14217534	0.1085838	0.097287356	0.011296444	2.79E-06	0.0497538	chr12	49525474
cg25494151	0.110855693	0.136960392	-0.026104698	3.04E-06	0.0497538	chr2	7006339
cg07940280	0.841908487	0.818550415	0.023358071	3.14E-06	0.0497538	chr17	11054037
cg18227776	0.806633573	0.828776695	-0.022143122	3.23E-06	0.0497538	chr8	71063694
cg05138082	0.878508903	0.861473428	0.017035475	3.63E-06	0.0497538	chr14	54392087
cg22179059	0.868150466	0.841396198	0.026754268	3.66E-06	0.0497538	chr6	29714945
cg02896705	0.609246982	0.588930399	0.020316583	3.76E-06	0.0497538	chr19	18112042
cg25493545	0.102766653	0.119669235	-0.016902582	3.93E-06	0.0497538	chr19	10812419
cg15985418	0.914919536	0.905735814	0.009183722	4.13E-06	0.0497538	chr19	49173732
cg01982835	0.770527939	0.810153243	-0.039625303	4.21E-06	0.0497538	chr20	34995278
cg07645718	0.09100693	0.110580173	-0.019573242	4.30E-06	0.0497538	chr20	61493192
cg23281369	0.102672743	0.114850299	-0.012177556	4.30E-06	0.0497538	chr9	91933285
cg07240000	0.146678451	0.164878525	-0.018200074	4.53E-06	0.0497538	chr1	17878538
cg25966751	0.547743559	0.565402519	-0.01765896	4.54E-06	0.0497538	chr14	74098320
cg14266436	0.883222741	0.876461954	0.006760787	4.57E-06	0.0497538	chr19	34302242
cg08092966	0.871948537	0.888617428	-0.016668891	4.59E-06	0.0497538	chr8	19009591
cg10281977	0.284819895	0.353605549	-0.068785654	4.61E-06	0.0497538	chr14	105070864
cg14376110	0.678155355	0.655080917	0.023074439	4.77E-06	0.0497538	chr2	202354859
cg15788059	0.894690996	0.879478165	0.015212831	4.79E-06	0.0497538	chr22	26961237
cg10176185	0.861428543	0.842802362	0.01862618	4.80E-06	0.0497538	chr1	25894479
cg10715637	0.16788488	0.206197918	-0.038313038	4.91E-06	0.0497538	chr10	90751534

cg14582248	0.743820441	0.778120355	-0.034299913	5.19E-06	0.049815898	chr6	5066984
cg21821755	0.930495223	0.922148033	0.00834719	5.39E-06	0.049815898	chr7	88315898
cg12046414	0.084512498	0.100154771	-0.015642273	5.40E-06	0.049815898	chr2	220379199
cg18356974	0.322261855	0.363458605	-0.04119675	5.40E-06	0.049815898	chr7	128809100
cg19838074	0.894967865	0.88852596	0.006441905	5.46E-06	0.049815898	chr2	242149865
cg09857761	0.84971994	0.862956676	-0.013236736	5.60E-06	0.049846644	chr16	815553
cg03881524	0.777887088	0.79596786	-0.018080772	5.68E-06	0.049846644	chr7	47165287
cg26241240	0.615258685	0.650227232	-0.034968547	6.08E-06	0.051739581	chr11	60893661
cg05175353	0.951897702	0.939760392	0.01213731	6.19E-06	0.051739581	chr6	596127
cg19212550	0.605908766	0.571054158	0.034854608	6.24E-06	0.051739581	chr10	101767908
cg14857063	0.932732102	0.916261482	0.01647062	6.65E-06	0.05416591	chr13	110763402
cg20535253	0.900829218	0.875681243	0.025147975	7.06E-06	0.054866312	chr4	122875768
cg14833935	0.908389292	0.917712972	-0.00932368	7.08E-06	0.054866312	chr6	31927895
cg23843045	0.723134234	0.694576411	0.028557824	7.18E-06	0.054866312	chr4	123297318
cg16883533	0.127965545	0.139096537	-0.011130992	7.23E-06	0.054866312	chr12	7079667
cg00953309	0.889825126	0.876066163	0.013758964	7.34E-06	0.054866312	chr1	16460784
cg24466610	0.931872954	0.92261223	0.009260725	7.98E-06	0.058696288	chr11	433702
cg03413208	0.925994669	0.936343406	-0.010348737	8.20E-06	0.058977974	chr3	160879619
cg06925530	0.839396615	0.85047034	-0.011073725	8.27E-06	0.058977974	chr6	16347397
cg07957471	0.952986407	0.94381576	0.009170647	8.60E-06	0.058989014	chr10	49658574
cg03349251	0.796787769	0.757276657	0.039511112	8.62E-06	0.058989014	chr6	10832472
cg23457357	0.736802767	0.705566711	0.031236056	8.71E-06	0.058989014	chr6	31148748
cg17886715	0.682407193	0.716932708	-0.034525516	8.79E-06	0.058989014	chr1	247269490
cg06096916	0.880015471	0.865146268	0.014869203	9.17E-06	0.059552749	chr7	1989032
cg01381374	0.537326866	0.559360672	-0.022033806	9.46E-06	0.059552749	chr7	93474158
cg00415763	0.690788081	0.662532959	0.028255122	9.57E-06	0.059552749	chr16	66984264
cg24609304	0.846329132	0.862898498	-0.016569365	9.62E-06	0.059552749	chr2	32483287
cg08961047	0.884492596	0.868176909	0.016315687	9.65E-06	0.059552749	chr6	34395138
cg27567135	0.662144319	0.67931311	-0.017168791	9.71E-06	0.059552749	chr17	53095518
cg25867545	0.301429029	0.319451226	-0.018022197	9.79E-06	0.059552749	chr3	182880776
cg18112295	0.1069577	0.120411242	-0.013453541	9.96E-06	0.059810246	chr5	96519566
cg26547526	0.835092431	0.815970167	0.019122264	1.04E-05	0.060853658	chr10	2666743
cg22447396	0.589553583	0.56848849	0.021065094	1.05E-05	0.060853658	chr1	153966266
cg12935979	0.563954749	0.6024864	-0.038531651	1.06E-05	0.060853658	chr4	147559648
cg03889810	0.882511948	0.854603633	0.027908315	1.07E-05	0.060853658	chr7	97884367
cg08676905	0.1113959	0.128854391	-0.017458491	1.09E-05	0.061397533	chr10	6019609
cg25059588	0.859962398	0.875666772	-0.015704373	1.11E-05	0.061864999	chr2	220286185
cg04181696	0.843863113	0.857833881	-0.013970768	1.15E-05	0.062975854	chr2	60981948
cg10582639	0.37162268	0.344186355	0.027436325	1.17E-05	0.063358016	chr11	121526840
cg04216796	0.880067949	0.865073597	0.014994352	1.18E-05	0.063358016	chr3	128770015
cg19471725	0.831534764	0.798268129	0.033266635	1.20E-05	0.063621771	chr3	126113344
cg07809831	0.877661991	0.858000951	0.019661039	1.24E-05	0.063809485	chr16	48428016
cg22375623	0.760500643	0.73957915	0.020921493	1.24E-05	0.063809485	chr15	78444981
cg26756396	0.768880221	0.734714467	0.034165754	1.24E-05	0.063809485	chr19	7459296
cg17445987	0.128754538	0.14673055	-0.017976012	1.27E-05	0.064494536	chr19	10305305
cg24005743	0.480722913	0.49615575	-0.015432837	1.32E-05	0.065592546	chr11	32112810
cg15068487	0.170377729	0.144147787	0.026229942	1.33E-05	0.065592546	chr2	15701235

cg11150068	0.10474812	0.120414803	-0.015666684	1.34E-05	0.065592546	chr10	111683422
cg06820859	0.854018553	0.835942886	0.018075666	1.37E-05	0.065592546	chr13	21564784
cg16275967	0.133182338	0.118376551	0.014805787	1.37E-05	0.065592546	chr1	161172255
cg12582138	0.880035182	0.873080586	0.006954597	1.38E-05	0.065592546	chr17	48183477
cg14151995	0.787593153	0.761727289	0.025865864	1.41E-05	0.066081594	chr11	17793529
cg09675820	0.89926811	0.890168202	0.009099908	1.42E-05	0.066081594	chr17	77997453
cg02070290	0.912873615	0.898606917	0.014266699	1.46E-05	0.067508429	chr17	68071397
cg05844366	0.603847168	0.639590887	-0.03574372	1.49E-05	0.068106268	chr10	91738713
cg10811509	0.654476312	0.674357223	-0.019880911	1.53E-05	0.068840217	chr19	27739313
cg03292388	0.236203977	0.199499189	0.036704788	1.55E-05	0.068840217	chr4	8594514
cg25951580	0.102865129	0.13032228	-0.027457151	1.55E-05	0.068840217	chr19	58962937
cg03983808	0.654200764	0.634636679	0.019564084	1.58E-05	0.069292916	chr10	43133352
cg09362956	0.892909606	0.919567918	-0.026658312	1.64E-05	0.071385779	chr22	32749962
cg04171308	0.099404775	0.109135612	-0.009730837	1.69E-05	0.072698667	chr12	112856542
cg06832605	0.414216957	0.435915753	-0.021698796	1.72E-05	0.073509104	chr20	26319303
cg27105914	0.646209477	0.611742969	0.034466508	1.75E-05	0.073509104	chr17	76445798
cg08862717	0.595382958	0.562576465	0.032806493	1.77E-05	0.073509104	chr2	101763598
cg09767616	0.630652754	0.653749114	-0.023096359	1.77E-05	0.073509104	chr19	58115732
cg05825127	0.831425971	0.846937081	-0.015511109	1.81E-05	0.073687248	chr10	121398040
cg13663416	0.88289499	0.873083114	0.009811875	1.82E-05	0.073687248	chr17	4868062
cg12798564	0.541554718	0.570952523	-0.029397805	1.83E-05	0.073687248	chr3	75263641
cg01403307	0.83509638	0.849446794	-0.014350414	1.86E-05	0.074407588	chr10	134303076
cg18005896	0.824548715	0.842051054	-0.017502339	1.88E-05	0.074407588	chr6	168948135
cg19955849	0.849632484	0.827016688	0.022615796	1.90E-05	0.074713136	chr4	140095286
cg15209934	0.553235794	0.517423528	0.035812267	1.93E-05	0.074974795	chr19	52800385
cg12216772	0.693528313	0.656146717	0.037381596	1.95E-05	0.074974795	chr10	46164062
cg20731100	0.731801833	0.705881319	0.025920514	1.98E-05	0.074974795	chr7	47298162
cg20646500	0.555932874	0.49458779	0.061345084	2.01E-05	0.074974795	chr6	42536105
cg24907970	0.054835867	0.042257018	0.012578848	2.01E-05	0.074974795	chr5	65018155
cg02454501	0.089473122	0.123292242	-0.03381912	2.02E-05	0.074974795	chr11	8285505
cg18249414	0.892823075	0.881788203	0.011034872	2.02E-05	0.074974795	chr15	101626335
cg24688939	0.924756676	0.918207878	0.006548798	2.07E-05	0.076007231	chr21	47545588
cg04252689	0.863876618	0.843456801	0.020419817	2.10E-05	0.076007231	chr19	52210193
cg24148757	0.58260589	0.610485414	-0.027879524	2.10E-05	0.076007231	chr1	112942995
cg05523455	0.163006047	0.176354811	-0.013348763	2.13E-05	0.076678425	chr9	136243219
cg06529894	0.896453319	0.878219494	0.018233826	2.16E-05	0.076915707	chr7	76025038
cg13947513	0.91118286	0.899493635	0.011689226	2.23E-05	0.078693823	chr4	172824551
cg15980914	0.72516401	0.759487223	-0.034323212	2.24E-05	0.078693823	chr19	28297092
cg01441105	0.797149637	0.813971394	-0.016821757	2.34E-05	0.081471851	chr22	38469264
cg10318313	0.466300788	0.485136903	-0.018836115	2.40E-05	0.082294307	chr11	3014937
cg08539210	0.165012897	0.196644912	-0.031632014	2.41E-05	0.082294307	chr16	90038463
cg23924911	0.731528552	0.750997943	-0.019469391	2.42E-05	0.082294307	chr19	43200890
cg20368463	0.95120075	0.960552903	-0.009352153	2.45E-05	0.082315057	chr18	77673604
cg14028967	0.691657647	0.70844449	-0.016786844	2.49E-05	0.082315057	chr9	37419444
cg14339397	0.539873517	0.503753511	0.036120007	2.49E-05	0.082315057	chr13	27338713
cg25652781	0.869169207	0.882797774	-0.013628567	2.49E-05	0.082315057	chr4	153586344
cg15653559	0.869892352	0.853737111	0.016155241	2.56E-05	0.083327483	chr6	31597080

cg01016459	0.096064981	0.10888072	-0.012815739	2.57E-05	0.083327483	chr16	53468960
cg12977937	0.708926893	0.637380818	0.071546075	2.58E-05	0.083327483	chr17	54860136
cg01971789	0.940530954	0.929880006	0.010650948	2.59E-05	0.083327483	chr6	28889545
cg08486065	0.924829953	0.918333693	0.00649626	2.75E-05	0.084059122	chr19	3464875
cg13936208	0.795241673	0.78193364	0.013308033	2.76E-05	0.084059122	chr12	121835047
cg11704463	0.852652929	0.838402338	0.014250591	2.78E-05	0.084059122	chr12	124968399
cg25753720	0.925320767	0.941618636	-0.016297869	2.80E-05	0.084059122	chr2	200904751
cg10081115	0.818626549	0.846775784	-0.028149235	2.84E-05	0.084059122	chr2	190686883
cg21400851	0.608521573	0.631992007	-0.023470434	2.84E-05	0.084059122	chr17	73056681
cg11830508	0.887142343	0.87300111	0.014141233	2.85E-05	0.084059122	chr5	179920202
cg17851126	0.83271607	0.819546153	0.013169917	2.87E-05	0.084059122	chr19	10503723
cg18205465	0.445624101	0.415150582	0.030473518	2.87E-05	0.084059122	chr7	45026543
cg01090686	0.650597144	0.670653742	-0.020056598	2.88E-05	0.084059122	chr12	133000028
cg27362115	0.900680499	0.893724938	0.006955562	2.89E-05	0.084059122	chr11	65172423
cg08867267	0.748353177	0.771453616	-0.023100439	2.90E-05	0.084059122	chrX	130033963
cg08757624	0.783982643	0.737026909	0.046955734	2.91E-05	0.084059122	chr7	132677298
cg23044178	0.912266759	0.930382445	-0.018115686	2.92E-05	0.084059122	chr11	12136405
cg09956747	0.716516285	0.666355358	0.050160927	2.93E-05	0.084059122	chr16	31538556
cg18239858	0.825304109	0.843248467	-0.017944358	2.95E-05	0.084059122	chr7	101712363
cg20944521	0.562304635	0.595401006	-0.033096371	2.96E-05	0.084059122	chr14	22218494
cg13430777	0.821041192	0.839451756	-0.018410564	3.05E-05	0.084059122	chr12	8559701
cg01766505	0.867024996	0.837413574	0.029611422	3.06E-05	0.084059122	chr17	25679717
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cg01575164	0.714362906	0.729474296	-0.01511139	0.000282202	0.194484369	chr3	197515016
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cg09412808	0.860331424	0.852670522	0.007660903	0.000284987	0.195606122	chr4	57180590
cg06251958	0.598259794	0.615495354	-0.01723556	0.000285116	0.195606122	chr7	102989081
cg27466615	0.924594677	0.91339647	0.011198207	0.00028699	0.195965977	chr17	80678315
cg24621371	0.765118695	0.744348292	0.020770404	0.000287086	0.195965977	chr12	125531715
cg00559790	0.088428407	0.099099962	-0.010671555	0.000287119	0.195965977	chr1	93914052
cg02592416	0.867907418	0.878602019	-0.0106946	0.000287922	0.195965977	chr12	52680161
cg08866814	0.94489444	0.936581538	0.008312902	0.000288111	0.195965977	chr16	89351500
cg05735180	0.607043895	0.564470802	0.042573093	0.000288218	0.195965977	chr18	55095177
cg09622269	0.588894194	0.622904268	-0.034010075	0.00028948	0.196285281	chr10	76803925
cg15019005	0.722928867	0.737784067	-0.0148552	0.00028978	0.196285281	chr5	7825313
cg13898697	0.913325257	0.908460482	0.004864775	0.000289978	0.196285281	chr1	36641773
cg08742360	0.817221173	0.804605253	0.01261592	0.000291031	0.196706091	chr6	149019254
cg13534503	0.958462717	0.964821733	-0.006359016	0.0002917	0.196866535	chr9	139535765
cg26473110	0.76182225	0.742990695	0.018831555	0.000293379	0.197607128	chr11	46385365
cg14145438	0.927958625	0.916704929	0.011253696	0.000293699	0.197607128	chr3	43428668
cg10169812	0.907399315	0.891423454	0.015975861	0.000294097	0.197607128	chr4	15779392
cg17897352	0.876081556	0.885908908	-0.009827352	0.00029529	0.197752564	chr10	121011644
cg23530263	0.234654116	0.264149869	-0.029495753	0.000295452	0.197752564	chr19	55996431
cg10741826	0.919710192	0.915910812	0.00379938	0.00029685	0.197752564	chr11	128680466
cg13152990	0.856647504	0.877000852	-0.020353349	0.000297024	0.197752564	chr13	39584965
cg11075121	0.107117969	0.12023474	-0.013116771	0.000297085	0.197752564	chr12	120967065
cg07141527	0.741062131	0.717492485	0.023569645	0.000297332	0.197752564	chr12	121202554
cg17079378	0.023224868	0.03044584	-0.007220972	0.000297458	0.197752564	chr1	46713440
cg06186457	0.398790194	0.417121632	-0.018331438	0.000298186	0.197752564	chr6	4504273
cg11601443	0.857664303	0.839656341	0.018007962	0.000298214	0.197752564	chr12	113415930
cg14700153	0.937392538	0.930579922	0.006812615	0.000300067	0.198271306	chr18	77515904
cg23197881	0.113501352	0.128224005	-0.014722653	0.000300249	0.198271306	chr12	70133421
cg26353844	0.495879766	0.521342055	-0.02546229	0.00030064	0.198271306	chr1	95133907
cg23530053	0.122324786	0.136151756	-0.01382697	0.000301504	0.198271306	chr18	20513673
cg22529861	0.111732076	0.120395667	-0.008663591	0.000301543	0.198271306	chr11	11643697
cg04830812	0.579047891	0.548687897	0.030359995	0.000301604	0.198271306	chr12	7074724
cg05086567	0.901240296	0.907659327	-0.006419032	0.000303085	0.198958127	chr17	7486615
cg08731817	0.864353941	0.845380334	0.018973607	0.000305014	0.199349794	chr6	158443177
cg23465426	0.445005759	0.461877079	-0.016871321	0.000305338	0.199349794	chr6	32847377
cg04111029	0.779955779	0.753588012	0.026367767	0.000305614	0.199349794	chr2	17718449
cg07578410	0.157799191	0.178531155	-0.020731964	0.000305866	0.199349794	chr5	171710114

Supplementary Table S2: CpGs associated with E2 levels in PCOS patients

Row.names	intercept	beta	t	pval	qval	chr	pos
cg23363602	0.102166234	0.000817118	8.513428889	2.96E-09	0.000824783	chr6	29933971
cg11136592	0.984405633	-0.001792114	-8.454523353	3.41E-09	0.000824783	chr10	5246625
cg13551074	0.925127162	-0.001251204	-7.548275307	3.19E-08	0.003682075	chr2	243017952
cg00836091	0.120749179	-0.000270603	-7.433627511	4.27E-08	0.003682075	chr3	53290192
cg02031121	1.042458795	-0.001966545	-7.407831518	4.56E-08	0.003682075	chr15	52331471
cg15027633	1.009287773	-0.001623296	-7.407381353	4.57E-08	0.003682075	chr6	14771388
cg08872590	0.010982342	0.000707927	7.25610341	6.72E-08	0.004027238	chr8	145748059
cg26537272	0.987450513	-0.001543158	-7.238354418	7.03E-08	0.004027238	chr5	1214606
cg11005027	1.006946104	-0.002397732	-7.207541655	7.61E-08	0.004027238	chr11	134237890
cg24983605	0.946537249	-0.001372675	-7.138973695	9.08E-08	0.004027238	chr2	180487919
cg16114706	0.91656486	-0.001117874	-7.135666408	9.16E-08	0.004027238	chr22	46509464
cg01726982	0.965072066	-0.001348006	-6.877137527	1.79E-07	0.007214339	chr1	228630108
cg18266400	1.039032765	-0.002090381	-6.802361278	2.18E-07	0.007547297	chr3	124990403
cg05146395	0.975735319	-0.001888482	-6.722094178	2.68E-07	0.007547297	chr20	61314143
cg03884018	1.055553325	-0.002715018	-6.708728487	2.78E-07	0.007547297	chr16	26044240
cg18988159	0.998456927	-0.001776554	-6.695506883	2.88E-07	0.007547297	chr8	33459821
cg12578563	1.039350345	-0.001836262	-6.681426845	2.99E-07	0.007547297	chr11	1159210
cg08466517	1.095352704	-0.003463201	-6.670940596	3.07E-07	0.007547297	chr4	122138632
cg15423862	0.977504675	-0.00093381	-6.66973127	3.08E-07	0.007547297	chr3	155838109
cg07560948	0.885211851	-0.001145255	-6.662018199	3.14E-07	0.007547297	chr1	41264498
cg26008260	1.005072573	-0.001433416	-6.638965971	3.34E-07	0.007547297	chr2	25057298
cg23934075	0.058674222	0.000644621	6.628537809	3.43E-07	0.007547297	chr6	29933697
cg06686422	0.995510621	-0.002174586	-6.604626698	3.66E-07	0.007688472	chr5	174174566
cg07719523	0.986737203	-0.001711395	-6.577992408	3.92E-07	0.007904158	chr19	746526
cg07370274	0.9713068	-0.001350294	-6.560045298	4.11E-07	0.007956019	chr9	29825210
cg18098534	0.97871495	-0.001429284	-6.538160023	4.36E-07	0.007967486	chr14	86088124
cg19453472	0.982383986	-0.002095055	-6.530363221	4.45E-07	0.007967486	chr7	1139076
cg04842352	0.101764429	0.00218088	6.513497387	4.65E-07	0.008033253	chr16	49907368
cg20006652	0.792518388	-0.001261566	-6.49618871	4.87E-07	0.008094732	chr6	142238173
cg07592775	1.010080904	-0.002513548	-6.484541406	5.02E-07	0.008094732	chr1	19210017
cg09730955	0.982416577	-0.001491325	-6.444471677	5.58E-07	0.008710969	chr5	143130392
cg04644773	0.098265839	0.000591849	6.424436701	5.89E-07	0.008899302	chr5	179636283
cg16919579	0.806435661	-0.00106288	-6.402249685	6.24E-07	0.009153098	chr2	157632795
cg18523346	0.950634468	-0.001349508	-6.382363322	6.58E-07	0.009365792	chr4	1729959
cg19536902	1.049122177	-0.002368287	-6.302565732	8.14E-07	0.011058543	chr11	13305152
cg09259797	0.993810453	-0.001350703	-6.298453801	8.23E-07	0.011058543	chr13	106650225
cg02038418	1.022326208	-0.001367376	-6.281969319	8.60E-07	0.011243031	chr15	39958882
cg11932575	0.956522474	-0.001274017	-6.26888896	8.90E-07	0.011291198	chr4	128048177
cg25165144	0.938144242	-0.001937173	-6.260631399	9.10E-07	0.011291198	chr12	670974
cg09730302	0.939598714	-0.002150691	-6.23620939	9.72E-07	0.011750563	chr10	128595047
cg07784793	1.009773231	-0.001626202	-6.223817666	1.00E-06	0.011849775	chr5	33794720
cg16437009	0.051013097	0.002883909	6.208226652	1.05E-06	0.012059789	chr10	98945799
cg23598886	0.902376237	-0.000717029	-6.192401042	1.09E-06	0.012077031	chr18	12777645
cg08026818	0.080613733	0.000238686	6.181893102	1.12E-06	0.012077031	chr16	77823221
cg09532664	0.993697121	-0.002073933	-6.183425746	1.12E-06	0.012077031	chr5	9631216

cg26197930	1.000250414	-0.002710581	-6.1661697	1.17E-06	0.012322202	chr5	1222775
cg00807237	0.930401632	-0.001287438	-6.156806948	1.20E-06	0.012366131	chr7	934156
cg11176525	0.968836611	-0.001038188	-6.113353515	1.35E-06	0.013603585	chr3	45003829
cg05483487	0.90063237	-0.002092788	-6.088966746	1.44E-06	0.013736558	chr12	670892
cg08836825	0.91831665	-0.001138895	-6.087847778	1.45E-06	0.013736558	chr6	82726757
cg07836887	0.970957939	-0.000959096	-6.077207083	1.49E-06	0.013736558	chr17	5346448
cg00048705	0.975200399	-0.001194602	-6.066490357	1.53E-06	0.013736558	chr6	170563326
cg05798111	0.960355763	-0.001707681	-6.063900289	1.54E-06	0.013736558	chr16	68560845
cg04024413	0.045709707	0.000497755	6.05960211	1.56E-06	0.013736558	chr6	27782541
cg21630370	0.88423895	-0.001249349	-6.05899613	1.56E-06	0.013736558	chr7	45141979
cg03570577	0.880979856	-0.000940478	-6.04137466	1.64E-06	0.014042959	chr6	29765324
cg08320316	0.977598548	-0.001095686	-6.037488313	1.65E-06	0.014042959	chr7	5812747
cg03085859	0.605584326	-0.000378136	-5.965093201	2.01E-06	0.016768067	chr6	29457094
cg27509366	0.966084078	-0.001497949	-5.949699299	2.10E-06	0.017155048	chr8	142149222
cg26977256	0.906259875	-0.000514391	-5.944036768	2.13E-06	0.017155048	chr6	32022470
cg05780294	0.943688775	-0.001348351	-5.929062056	2.22E-06	0.017568703	chr7	128312789
cg06880420	0.917687164	-0.001437508	-5.913685325	2.31E-06	0.018016985	chr1	200119987
cg16771467	0.939395563	0.000132464	5.871948166	2.58E-06	0.019602154	chr18	55315872
cg02747151	1.015507363	-0.001304901	-5.870574733	2.59E-06	0.019602154	chr15	25981177
cg22829451	0.948169278	-0.000946094	-5.864923058	2.63E-06	0.019602154	chrX	70151816
cg17822978	0.979140673	-0.001112134	-5.850586092	2.74E-06	0.020067263	chr15	72073485
cg13085030	1.006686713	-0.002093239	-5.829056711	2.90E-06	0.020951678	chr7	1090504
cg24709001	0.979009132	-0.001017204	-5.82357548	2.95E-06	0.020951678	chr4	3235319
cg10541332	0.087687504	0.000767506	5.816372806	3.00E-06	0.021053982	chr3	61237712
cg07830126	0.923727736	-0.001560464	-5.804234672	3.10E-06	0.02128189	chr1	3477690
cg07341073	0.920425244	0.000283371	5.801823128	3.12E-06	0.02128189	chr2	175300689
cg07170252	0.985493171	-0.001778107	-5.772753421	3.38E-06	0.022525126	chr14	76870544
cg26996890	0.974780924	-0.001335019	-5.770568583	3.40E-06	0.022525126	chr7	1980808
cg19205926	0.88259869	-0.000730957	-5.757432212	3.52E-06	0.023025056	chr4	6757569
cg01758856	0.93419929	-0.000348531	-5.708830688	4.02E-06	0.025914615	chr17	80814611
cg19987253	0.884869383	-0.000440388	-5.700130628	4.11E-06	0.025971281	chr7	1981314
cg11004284	0.179800467	0.001736618	5.698315461	4.13E-06	0.025971281	chr3	15470105
cg01267068	0.937999507	-0.001341237	-5.633158125	4.93E-06	0.030595128	chr2	731158
cg04218124	0.86796176	-0.001119482	-5.600567351	5.39E-06	0.033003053	chr2	219284345
cg20675194	0.949390537	-0.000790818	-5.580788159	5.69E-06	0.034389735	chr11	58694219
cg01380321	0.593127204	-0.001794877	-5.523156076	6.65E-06	0.039556297	chr15	98631681
cg11753155	0.094166023	0.001437609	5.51921389	6.72E-06	0.039556297	chr6	29760148
cg09790780	0.868882545	-0.000279469	-5.511484849	6.87E-06	0.039556297	chr16	7482013
cg11419575	0.932036512	-0.001042904	-5.511368989	6.87E-06	0.039556297	chr2	153057378
cg07834476	0.046441822	0.000244673	5.505235676	6.98E-06	0.039748761	chr10	25305695
cg15714607	0.076449231	0.000839988	5.461041203	7.88E-06	0.044308765	chr11	75526013
cg00536383	0.065423596	0.000799665	5.439037952	8.36E-06	0.046504432	chr2	9346592
cg15861540	0.088759863	0.000275173	5.395163826	9.43E-06	0.051814471	chr19	3606463
cg24737193	0.897404385	-0.001018335	-5.382602384	9.75E-06	0.053016958	chr18	12778029
cg17924813	0.134474248	0.000475996	5.333877422	1.11E-05	0.059220325	chr4	15704844
ch.12.859106F	0.108930101	-0.000229314	-5.334056782	1.11E-05	0.059220325	chr12	42882094
cg00984474	0.214047937	-0.000465545	-5.314147629	1.18E-05	0.061816063	chr5	7850922

cg22466043	0.036028665	0.001443976	5.303692282	1.21E-05	0.062921129	chr10	38692145
cg21193744	0.933520485	-0.001203821	-5.290677739	1.25E-05	0.064502532	chr8	6405105
cg13168820	0.129993803	0.000340323	5.273340292	1.31E-05	0.066916496	chr20	41818356
cg11298989	0.022287439	0.000229387	5.257909472	1.37E-05	0.069068611	chr19	54960853
cg27121529	0.04777533	0.000287343	5.249666629	1.40E-05	0.069912414	chr7	99102251
cg01810111	0.098625023	0.000675412	5.217344121	1.53E-05	0.07558476	chr6	27637395
cg15946590	0.334291769	0.000973453	5.204088154	1.59E-05	0.077580004	chr6	30421089
cg07301433	0.183595193	-0.000552222	-5.192995488	1.64E-05	0.079167117	chr2	38303999
cg11226480	0.033235333	0.000366614	5.1884756	1.66E-05	0.079357135	chr12	51442072
cg17093826	0.834498367	0.000328261	5.183929628	1.68E-05	0.079561112	chr7	138458720
cg02599587	0.8867479	-0.000295687	-5.16708152	1.76E-05	0.082500237	chr5	153275285
cg09635053	0.058472989	0.000870174	5.115945361	2.02E-05	0.0939614	chr16	1031944
cg25921736	0.848271035	-0.000360112	-5.10790294	2.06E-05	0.09441414	chr7	139971436
cg12871376	0.728546023	-0.000810979	-5.107217768	2.07E-05	0.09441414	chr6	41716240
cg08506127	0.723385109	-0.000621008	-5.101908231	2.10E-05	0.094899089	chr2	87018958
cg00323861	0.961745364	-0.002405434	-5.063366856	2.33E-05	0.103577742	chr4	70155747
cg18339359	1.05530747	-0.003702409	-5.063122382	2.33E-05	0.103577742	chr8	23423757
cg20009461	0.93996791	0.000108164	5.053701962	2.39E-05	0.104365053	chr17	80560634
cg22272840	0.251290957	0.00111238	5.054962875	2.39E-05	0.104365053	chr8	10586882
cg04007531	0.093946093	0.001708624	5.041905524	2.47E-05	0.106823502	chr6	29933511
cg12601945	0.141282573	0.000598153	5.020752127	2.62E-05	0.112182347	chr1	18958924
cg18538138	0.915956922	0.000256249	5.013374924	2.67E-05	0.113464058	chr2	33604572
cg13934625	0.34369677	-0.000645956	-5.008161131	2.71E-05	0.114092373	chr15	52472770
cg06068179	0.981427178	-0.001610229	-4.99359832	2.82E-05	0.117703629	chr4	7814047
cg21816685	0.097115529	0.00041199	4.982199339	2.91E-05	0.120392253	chr8	2023317
cg11181587	0.832692382	-0.000427394	-4.947875743	3.20E-05	0.13012729	chr10	121772185
cg12254517	0.827643066	-0.001018672	-4.947563938	3.20E-05	0.13012729	chr12	93454991
cg11814464	0.116662591	0.000383607	4.910578418	3.54E-05	0.142776032	chr18	7567548
cg16364155	0.909163446	-0.000462254	-4.900578481	3.64E-05	0.143447304	chr3	147144980
cg25006249	0.908276343	-0.001340334	-4.901020371	3.64E-05	0.143447304	chr20	259898
cg03698374	0.778885228	-0.001608698	-4.899832223	3.65E-05	0.143447304	chr4	1362912
cg16769381	0.93313552	0.000137472	4.887209582	3.78E-05	0.147287077	chr11	46391053
cg13225413	0.163132016	0.000520892	4.881033621	3.84E-05	0.148596926	chr17	5015653
cg17529745	0.857542225	0.000187035	4.872982534	3.92E-05	0.150660718	chr10	131708358
cg09911982	0.142222525	-0.000292841	-4.870183088	3.96E-05	0.150660718	chr6	33216283
cg15908308	0.869143781	-0.000312865	-4.856617533	4.10E-05	0.155131816	chr4	43459582
cg23941963	0.863877849	0.000185353	4.847368198	4.21E-05	0.157871195	chr7	204401
cg10189774	0.42861117	-0.000587286	-4.839765531	4.30E-05	0.159946821	chr4	17578691
cg15504747	0.058694223	0.000557087	4.819578244	4.54E-05	0.167648751	chr3	129312979
cg05345996	0.886603825	-0.000423924	-4.816975988	4.57E-05	0.167648751	chr10	133508028
cg17214754	0.869726442	0.00024993	4.800389931	4.79E-05	0.174105002	chr11	3168993
cg11401278	0.816926258	0.000324495	4.794614033	4.86E-05	0.175320554	chr11	2140096
cg06398643	0.905602326	0.000224261	4.792383265	4.89E-05	0.175320554	chr3	187896120
cg24631102	0.858489572	-0.000438155	-4.766771088	5.25E-05	0.186648898	chr10	129349644
cg13885748	0.113837676	0.000308374	4.76062045	5.34E-05	0.188426869	chr9	112232127
cg02679503	0.840303571	-0.000404346	-4.757629012	5.38E-05	0.188596739	chr2	42794680
cg16092346	0.945388778	-0.001382178	-4.754224728	5.43E-05	0.188989705	chr4	1363885

cg08352786	0.820009568	-0.000661013	-4.748528717	5.52E-05	0.190582855	chr12	81100403
cg04831495	0.948532415	-0.000278099	-4.738353511	5.67E-05	0.194565546	chr15	85060580
cg11265952	0.766522791	0.00022881	4.732814918	5.76E-05	0.196140819	chr3	57231292
cg19216044	0.960500897	-0.000210865	-4.728137945	5.83E-05	0.197273639	chr1	155005184

Supplementary Table S3: CpGs associated with PRL levels in PCOS patients

Row.names	intercept	beta	t	pval	qval	chr	pos
cg23339709	0.923410434	-0.002325525	-11.25788401	6.61E-12	2.40E-06	chr11	56258485
cg01847062	0.98549583	-0.008133101	-11.02809638	1.06E-11	2.40E-06	chr17	79792936
cg12046183	0.914340973	-0.005740527	-10.7056511	2.09E-11	2.40E-06	chr6	29859829
cg08017858	0.006825524	0.00797058	10.69719858	2.13E-11	2.40E-06	chr11	74022642
cg00409917	-0.001181505	0.003318406	10.626565	2.47E-11	2.40E-06	chr6	29894679
cg01062395	0.018308832	0.006598113	10.51334641	3.15E-11	2.55E-06	chr6	29855636
cg26649688	0.963318606	-0.004027965	-10.31511746	4.83E-11	2.90E-06	chr6	29858360
cg21557672	0.881455124	-0.003180453	-10.31196644	4.86E-11	2.90E-06	chr19	34315334
cg23238734	0.975924954	-0.003366653	-10.24856415	5.58E-11	2.90E-06	chr17	78661607
cg06655494	0.958887841	-0.003041032	-10.20408913	6.15E-11	2.90E-06	chr7	5415468
cg08186575	0.971461468	-0.003710828	-10.17364661	6.57E-11	2.90E-06	chr19	4371730
cg18274896	0.976863355	-0.003649976	-10.09057804	7.88E-11	3.19E-06	chr9	140395754
cg05611414	0.936897663	-0.003520704	-10.01830302	9.24E-11	3.24E-06	chr19	50643613
cg18805486	0.924095193	-0.004306019	-9.986858685	9.91E-11	3.24E-06	chr8	12551033
cg02632583	0.98336161	-0.002955336	-9.953417083	1.07E-10	3.24E-06	chr17	79253990
cg12619747	0.96193994	-0.004958517	-9.937075597	1.11E-10	3.24E-06	chr8	55180538
cg26353469	0.067382582	0.003384913	9.925609531	1.13E-10	3.24E-06	chr6	29855970
cg21331461	0.117129758	0.004510007	9.889338665	1.23E-10	3.25E-06	chr12	21927773
cg24179288	0.961297687	-0.002654475	-9.85120255	1.34E-10	3.25E-06	chr6	29867285
cg06064954	0.949513077	-0.003583791	-9.819278914	1.44E-10	3.25E-06	chr6	29869838
cg07811074	0.965133353	-0.003864891	-9.812616556	1.46E-10	3.25E-06	chr2	98350847
cg16223220	0.013781763	0.006213929	9.808351141	1.47E-10	3.25E-06	chr6	29855914
cg08231349	0.047125872	0.004140812	9.758562068	1.65E-10	3.34E-06	chr6	29894644
cg18423635	0.997192502	-0.003684488	-9.757292344	1.65E-10	3.34E-06	chr6	29869936
cg00598600	0.940960254	-0.004606751	-9.64953085	2.10E-10	4.08E-06	chr8	12610812
cg23266747	0.925513915	-0.003088461	-9.591212846	2.40E-10	4.44E-06	chr14	73168082
cg12801256	0.922098866	-0.003206231	-9.578592628	2.47E-10	4.44E-06	chr2	107459860
cg26419287	0.93777886	-0.00375833	-9.529247029	2.76E-10	4.79E-06	chr14	52482697
cg01101677	0.951165698	-0.004005535	-9.502842029	2.93E-10	4.91E-06	chr2	44313980
cg05989746	0.96365687	-0.003310684	-9.406513381	3.65E-10	5.91E-06	chr2	3425584
cg07754829	0.976021219	-0.001817582	-9.336612325	4.28E-10	6.71E-06	chr8	12551103
cg10148293	0.875820951	-0.002475955	-9.316594586	4.48E-10	6.80E-06	chr10	37413676
cg07273125	0.096909656	0.002503676	9.301960627	4.64E-10	6.82E-06	chr16	68295692
cg01718254	0.186596246	0.003328913	9.266358049	5.03E-10	7.16E-06	chr14	103995324
cg14893857	0.075062411	0.001782347	9.255489279	5.16E-10	7.16E-06	chr14	102554969
cg20578893	0.947236454	-0.003112739	-9.212532593	5.70E-10	7.69E-06	chr6	29870060
cg04459091	0.957980519	-0.003459861	-9.185006838	6.07E-10	7.97E-06	chr5	179751794
cg11079354	0.110958023	0.003783977	9.16785279	6.32E-10	8.07E-06	chr6	27740361
cg21549632	0.062537574	0.004656969	9.133801089	6.84E-10	8.51E-06	chr6	29856287
cg05074385	0.948113548	-0.002660126	-9.122567923	7.02E-10	8.52E-06	chr6	30137208

cg00453190	0.963315174	-0.00490928	-9.107026891	7.28E-10	8.62E-06	chr7	149460972
cg17865718	0.917809725	-0.003111162	-9.032321679	8.66E-10	9.92E-06	chr3	103926553
cg16555341	0.081027951	0.001489833	9.021489138	8.88E-10	9.92E-06	chr16	89160798
cg14230280	0.900521617	-0.002840325	-9.015612816	9.00E-10	9.92E-06	chr9	132502800
cg14667780	0.95433935	-0.002894131	-9.006714755	9.19E-10	9.92E-06	chr2	174613232
cg02223784	0.861663473	-0.002609368	-8.993345632	9.49E-10	1.00E-05	chr7	128589932
cg07983869	0.909674197	-0.002752721	-8.960044355	1.03E-09	1.05E-05	chr19	17802633
cg10474018	0.958955118	-0.002496225	-8.955458875	1.04E-09	1.05E-05	chr6	29860016
cg03177972	0.98901795	-0.003025034	-8.944923924	1.06E-09	1.05E-05	chr11	78480035
cg01793445	0.87412433	-0.003118531	-8.907628638	1.16E-09	1.11E-05	chr1	167632415
cg22354618	0.96242222	-0.002588483	-8.906080842	1.16E-09	1.11E-05	chr18	8800458
cg01723291	0.075296682	0.004346303	8.894500799	1.20E-09	1.12E-05	chr6	29855890
cg00943269	0.905953439	-0.001504248	-8.819466163	1.43E-09	1.31E-05	chr8	12550523
cg18325044	0.955198606	-0.002049413	-8.77151514	1.60E-09	1.44E-05	chr6	29868900
cg01876435	0.895887313	-0.002671208	-8.756739164	1.66E-09	1.46E-05	chr8	12545609
cg02227034	0.95537738	-0.002757632	-8.711178691	1.84E-09	1.59E-05	chr10	128080679
cg14973360	0.965421987	-0.004077322	-8.705077519	1.87E-09	1.59E-05	chr2	9800511
cg01398709	0.86769668	-0.004488268	-8.629827287	2.24E-09	1.87E-05	chr3	13918750
cg03593259	0.078320123	0.002680631	8.55950044	2.65E-09	2.18E-05	chr11	63321562
cg13946128	0.919691188	-0.004696372	-8.552174058	2.70E-09	2.18E-05	chr1	52372768
cg20537760	0.88579465	-0.003220536	-8.508360043	3.00E-09	2.38E-05	chr18	77534274
cg24528297	0.055884572	0.001646642	8.500500674	3.05E-09	2.39E-05	chr14	103995361
cg04939944	0.981243533	-0.00364283	-8.482802363	3.19E-09	2.45E-05	chr7	5390509
cg07831312	0.921982722	-0.003525331	-8.396419989	3.92E-09	2.98E-05	chr7	30855293
cg03995122	0.027878421	0.002281879	8.340062888	4.50E-09	3.36E-05	chr6	29894642
cg22945457	0.783841266	-0.002782118	-8.311040983	4.82E-09	3.55E-05	chr1	225612608
cg14117565	0.996834853	-0.009102028	-8.304689293	4.90E-09	3.55E-05	chr19	51850506
cg26127187	0.941395894	-0.003638573	-8.257299416	5.50E-09	3.93E-05	chr6	29856795
cg02687592	0.848986376	-0.003093388	-8.06838964	8.73E-09	6.14E-05	chr22	44708843
cg14667175	0.849444855	-0.002717311	-8.020032681	9.84E-09	6.81E-05	chr2	111623300
cg02523305	0.917403021	-0.003294413	-8.015105902	9.96E-09	6.81E-05	chr3	33263532
cg08545169	0.907243528	-0.001405803	-7.997647829	1.04E-08	7.01E-05	chr1	161169143
cg19617213	0.099869575	0.002344276	7.979895485	1.09E-08	7.22E-05	chr19	1074926
cg15944026	0.119332817	0.002164169	7.882586644	1.38E-08	9.07E-05	chr14	91883673
cg06451157	0.935929498	-0.001695081	-7.873892837	1.41E-08	9.14E-05	chr6	29868295
cg26965779	0.60414042	-0.00413718	-7.829559537	1.58E-08	0.000100155	chr6	29854089
cg08527435	0.875768342	-0.002675845	-7.82676586	1.59E-08	0.000100155	chr19	2200504
cg12998850	0.11986598	0.001545831	7.614691339	2.70E-08	0.000168189	chr6	29894946
cg11086883	0.557438738	-0.003588079	-7.596788883	2.83E-08	0.000173171	chr6	29908891
cg08661164	0.849490099	-0.002406106	-7.59305842	2.85E-08	0.000173171	chr1	93301669
cg04614203	0.563177139	-0.001781373	-7.57557512	2.98E-08	0.000178744	chrX	55114262
cg22167763	0.887249686	-0.002826962	-7.498662376	3.62E-08	0.000214463	chr13	95315772
cg10804687	0.955599083	-0.001487851	-7.463057535	3.96E-08	0.000231893	chr6	29859520
cg25650661	0.100941361	0.001609956	7.442407358	4.18E-08	0.000241465	chr6	29856278
cg22956635	0.975757794	-0.002854309	-7.380301859	4.89E-08	0.000279462	chr17	56566398
cg13946520	0.095467324	0.001748323	7.356583621	5.20E-08	0.000293426	chr2	87017689

cg14449180	0.109252657	0.002217793	7.326107969	5.62E-08	0.000313514	chr6	29894619
cg14766769	0.754409595	-0.002209626	-7.299549423	6.01E-08	0.00033172	chr9	125874000
cg17924072	0.115567047	0.001828031	7.294686825	6.09E-08	0.000332097	chr19	1075067
cg21836699	0.911261366	-0.001472	-7.240950969	6.99E-08	0.00037686	chr4	9557805
cg21810411	0.974657957	-0.007308597	-7.234503458	7.10E-08	0.000378933	chr6	32549139
cg06517984	0.879962938	-0.001196699	-7.204715381	7.67E-08	0.000404597	chr8	143407646
cg05088017	0.856357281	-0.002504125	-7.160234685	8.60E-08	0.000448742	chr15	22368957
cg01388630	0.968328655	-0.00733015	-7.112018414	9.73E-08	0.000502698	chr6	29817024
cg25023257	0.934770581	-0.001647131	-7.091748339	1.03E-07	0.000524118	chr1	203146223
cg02050694	0.125468346	0.002790783	7.058491327	1.12E-07	0.000565197	chr9	14346393
cg05834805	0.103843588	0.001380388	7.049792625	1.14E-07	0.000572097	chr9	123631524
cg20451455	0.875133306	-0.003198385	-7.029911954	1.20E-07	0.000596154	chr1	3449825
cg15697453	0.502760367	-0.001665995	-7.013280216	1.26E-07	0.000616108	chr6	31323985
cg15909951	0.092348646	0.000741771	6.96719478	1.42E-07	0.000687384	chr2	242743702
cg13470719	0.755037215	-0.002304518	-6.932595454	1.55E-07	0.000744591	chr7	157004224
cg07291958	0.081874288	0.001325477	6.922748247	1.59E-07	0.000756416	chr2	26785531
cg07731312	0.890214652	-0.000777394	-6.88507357	1.75E-07	0.000826261	chr16	88887321
cg14382215	0.81167243	-0.001961227	-6.805289827	2.16E-07	0.001007737	chr1	161169007
cg22989463	0.915630564	-0.001811943	-6.800705103	2.18E-07	0.001010175	chr8	12550605
cg03036047	0.946668321	-0.007087916	-6.783323934	2.29E-07	0.001047185	chr6	32362744
cg04214430	0.874415473	0.001036927	6.769622351	2.37E-07	0.001075275	chr13	50702707
cg04917511	0.044928388	0.002435103	6.740394673	2.56E-07	0.001143834	chr2	26785460
cg20465661	0.886556787	-0.002592404	-6.738958117	2.57E-07	0.001143834	chr1	248551409
cg05095290	0.205142571	0.002751738	6.709762552	2.77E-07	0.00121627	chr14	103995143
cg17431052	0.14457338	0.001655204	6.708615417	2.78E-07	0.00121627	chr19	37742481
cg03742947	0.105790242	0.000814475	6.654511787	3.21E-07	0.001389534	chr6	29856275
cg23619824	0.929118928	-0.000498618	-6.640960718	3.32E-07	0.001417162	chr10	133274140
cg10150686	0.046468125	0.002708313	6.637956414	3.35E-07	0.001417162	chr2	26785332
cg13667021	0.905294491	-0.002371802	-6.636982411	3.36E-07	0.001417162	chr11	124311423
cg04373948	0.784264643	-0.003027603	-6.564547663	4.06E-07	0.001697753	chr12	90806795
cg25043378	0.763283027	-0.002425439	-6.561905767	4.09E-07	0.001697753	chr8	41522857
cg14761252	0.09153213	0.001601376	6.542065019	4.31E-07	0.001773914	chr18	71815123
cg25668922	0.110539345	0.000678789	6.360939757	6.97E-07	0.002842935	chr5	34656126
cg23533270	0.80369607	-0.002843815	-6.317957981	7.81E-07	0.003160894	chr10	78635553
cg26133206	0.107519123	-0.000725855	-6.294124679	8.32E-07	0.003340285	chr5	133861746
cg05019905	0.116206299	0.002620094	6.281735207	8.60E-07	0.003424159	chr6	29894831
cg12477902	0.118986226	0.001341872	6.269535264	8.89E-07	0.003508649	chr19	44599083
cg00879843	0.084212113	0.000647233	6.241988783	9.57E-07	0.003745864	chr6	33239764
cg03091512	0.063351544	0.000911903	6.18182351	1.12E-06	0.004347943	chr2	227701050
cg14093630	0.149284409	-0.000961515	-6.180237109	1.13E-06	0.004347943	chr9	15423618
cg15547734	0.93231441	-0.000863484	-6.163797757	1.18E-06	0.004503819	chr5	45262443
cg07418114	0.785825968	-0.00160756	-6.161191731	1.19E-06	0.004503819	chr1	156836717
cg15931205	0.160724939	0.003341091	6.126381878	1.30E-06	0.004905636	chr6	29894820
cg16896847	0.060169672	0.001468019	6.050937448	1.60E-06	0.005960118	chr8	144512042
cg05299140	0.813821704	-0.003565115	-6.025143509	1.71E-06	0.006339127	chr17	47972401
cg05581880	0.927492565	-0.001341432	-6.017877232	1.74E-06	0.00641521	chr7	224681

cg04023150	0.044194338	0.001003149	6.014278858	1.76E-06	0.00642888	chr1	44873064
cg25623768	0.118836824	0.002357002	5.952503948	2.08E-06	0.007535102	chr2	45241008
cg16832267	0.130913979	0.002148988	5.908772827	2.34E-06	0.008414941	chr2	18060102
cg00599809	0.86203332	-0.001223808	-5.895589996	2.42E-06	0.008640461	chr7	72411550
cg23092777	0.060654055	0.000724424	5.893516802	2.44E-06	0.008640461	chr12	72057772
cg15631337	0.072270047	0.000629118	5.868250728	2.61E-06	0.009183192	chr17	46048070
cg14344315	0.08761901	0.000979463	5.838558648	2.83E-06	0.009878381	chr15	31733445
cg05049361	0.103341681	0.001306761	5.795058362	3.18E-06	0.011031733	chr14	69726536
cg06212289	0.138909453	0.001036915	5.78249591	3.29E-06	0.011264362	chr6	170606058
cg17583158	0.872685664	-0.003351996	-5.782100863	3.29E-06	0.011264362	chr8	2037874
cg25662463	0.092764752	0.001369246	5.778123722	3.33E-06	0.01130661	chr10	118897857
cg10151583	0.893772105	-0.001223373	-5.737542241	3.72E-06	0.012531927	chr16	88460502
cg09258813	0.11733558	0.002004469	5.72214111	3.88E-06	0.012975714	chr8	37823409
cg18875551	0.948530183	-0.000428601	-5.68355517	4.30E-06	0.014307665	chr1	24967164
cg24793642	0.747818058	-0.003370601	-5.674079668	4.41E-06	0.014580233	chr8	57351185
cg26230285	0.090621705	0.001164179	5.638193561	4.87E-06	0.015962711	chr15	26108412
cg02149708	0.114233734	0.000785708	5.601774517	5.37E-06	0.017503642	chr6	166582159
cg02737759	0.087075912	0.000506665	5.586412124	5.60E-06	0.01812794	chr12	72057786
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cg06902219	0.123487162	0.002525693	4.490979245	0.000111358	0.171636282	chr6	29856294
cg26092192	0.933036226	-0.000930873	-4.487578157	0.000112394	0.172684851	chr17	80759678
cg15549251	0.945749217	-0.000506464	-4.482617688	0.000113922	0.17448061	chr15	40426006
cg05442111	0.660676876	0.000853368	4.476634532	0.000115792	0.176053785	chr11	89901285

cg17653969	0.943212799	-0.000509176	-4.47537295	0.000116191	0.176053785	chr1	229439834
cg23070111	0.100166411	0.000423679	4.474766636	0.000116383	0.176053785	chr1	186649985
cg18881269	0.888510759	-0.000458198	-4.474713959	0.000116399	0.176053785	chr12	6936267
cg07139509	0.178658928	0.002907067	4.469490701	0.000118066	0.177794759	chr14	70038717
cg26473478	0.104468748	0.002296888	4.468816566	0.000118283	0.177794759	chr6	30614823
cg04724720	0.124701505	-0.00044323	-4.462351737	0.000120382	0.180157091	chr11	65640939
cg01667185	0.886408539	-0.000559745	-4.461698201	0.000120597	0.180157091	chr11	66625638
cg08362486	0.933685473	-0.000318986	-4.458495879	0.000121652	0.18063424	chr16	4935615
cg02230705	0.082523635	0.000625103	4.458471628	0.00012166	0.18063424	chr4	100867350
cg00963654	0.118143932	0.00221996	4.454930837	0.000122838	0.181826901	chr18	13801271
cg05948856	0.886753418	-0.000443575	-4.450997103	0.00012416	0.182954999	chr19	3982825
cg00634652	0.896783366	0.000750265	4.449556011	0.000124647	0.182954999	chr13	112166963
cg04186471	0.92017841	-0.000326629	-4.449311034	0.00012473	0.182954999	chrX	153523440
cg22161299	0.547767139	0.000863014	4.44670974	0.000125616	0.183400701	chr19	11468272
cg11224271	0.86359668	-0.000507794	-4.446202263	0.00012579	0.183400701	chr3	129744515
cg18957138	0.075720266	0.000271954	4.437719301	0.000128726	0.187119901	chr9	73027331
cg17508462	0.097863506	0.000494422	4.432517825	0.00013056	0.189219296	chr5	180542340
cg20971958	0.906547361	-0.001500561	-4.424342336	0.000133495	0.192897286	chr4	1594894
cg26463106	0.104151195	0.001105056	4.421196096	0.000134642	0.193977208	chr3	9404837
cg12030638	0.620803557	0.0010577	4.419246981	0.000135357	0.194430938	chrX	133675340
cg26801241	0.16901549	0.00090033	4.416163196	0.000136497	0.195489494	chr16	47495768
cg17988326	0.783915748	0.001044757	4.413010539	0.000137672	0.196429069	chr1	41091703
cg05704893	0.077568024	0.000285431	4.412235567	0.000137962	0.196429069	chr17	7982773
cg17163751	0.102910303	-0.000473405	-4.407312383	0.000139821	0.198493289	chr10	71812596
cg04864199	0.07551187	-0.000423976	-4.405086819	0.000140669	0.199115408	chr15	45493327
cg03958058	0.969342626	-0.007193203	-4.403470567	0.000141288	0.19941062	chr10	133761284

Supplementary Table S4: CpGs associated with progesterone levels in PCOS patients

Row.names	intercept	beta	t	pval	qval	chr	pos
cg00762003	1.098857134	-0.616724321	-6.64908018	3.25E-07	0.056684002	chr21	45393541
cg08188400	0.126165778	0.046313032	6.546351782	4.26E-07	0.056684002	chr19	7969347
cg07286123	0.102539658	0.035158316	6.542625459	4.30E-07	0.056684002	chr20	23067126
cg09546220	0.86888161	-0.050653241	-6.280399517	8.63E-07	0.085272869	chr21	40036490
cg02496295	0.171304643	0.07600485	6.19650408	1.08E-06	0.085348933	chr4	2846155
cg20947082	0.386072142	0.05318017	6.085557348	1.45E-06	0.095739393	chr1	233749643
cg15361028	0.106809472	0.033900248	6.00556114	1.80E-06	0.101737571	chr6	53658683
cg26847156	0.947833861	-0.060621147	-5.775799583	3.35E-06	0.136502163	chr18	10550303
cg07455790	0.86261056	-0.139314841	-5.773635372	3.37E-06	0.136502163	chr6	31650735
cg18726518	0.958558694	-0.028964356	-5.756047821	3.54E-06	0.136502163	chr12	132924516
cg03580106	0.156620317	0.104059743	5.684403084	4.29E-06	0.136502163	chr16	89283057
cg26775843	0.143536217	0.066163413	5.681400005	4.33E-06	0.136502163	chr4	88343678
cg22211395	0.028264357	0.043649311	5.667635755	4.49E-06	0.136502163	chr5	80597321
cg00738945	0.834725938	0.064204995	5.610385075	5.25E-06	0.140826711	chr6	32340354
cg00173538	0.831999484	0.047928257	5.602336074	5.36E-06	0.140826711	chr6	42071219
cg03190929	0.937169066	-0.026025455	-5.557803459	6.05E-06	0.140826711	chr17	38075855
cg21298523	-0.036778528	0.36120398	5.532864798	6.48E-06	0.140826711	chr4	88343936
cg13940125	0.999138128	-0.219025372	-5.51228039	6.85E-06	0.140826711	chr1	197237119

cg06128688	0.395258122	-0.126079643	-5.49526667	7.18E-06	0.140826711	chr12	96883733
cg09817985	0.75962029	0.098774591	5.491054892	7.26E-06	0.140826711	chr20	25054507
cg23522832	0.087983364	0.021278099	5.479690659	7.49E-06	0.140826711	chr1	45769727
cg24856518	0.08016155	0.024899728	5.424092067	8.71E-06	0.15640179	chr2	120517676
cg08428486	0.898561846	-0.090272945	-5.369345666	1.01E-05	0.172930917	chr7	140452281
cg12905273	0.067532901	0.043649968	5.346996044	1.07E-05	0.172930917	chr6	33359440
cg10572624	0.859286085	-0.037291684	-5.340349521	1.09E-05	0.172930917	chr1	40428318
cg00484206	0.886855097	0.038066988	5.286763813	1.27E-05	0.186982636	chr16	66041033
cg13588800	0.358803292	-0.109242946	-5.266638145	1.34E-05	0.186982636	chr7	19155785
cg01546814	1.113419379	-0.5147582	-5.252685326	1.39E-05	0.186982636	chr16	4295972
cg19919446	0.107107906	0.033241105	5.242720891	1.43E-05	0.186982636	chr3	98241922
cg03774288	0.886771586	0.043049401	5.240846733	1.44E-05	0.186982636	chr10	131647543
cg24665612	1.111509811	-0.471811288	-5.232912236	1.47E-05	0.186982636	chrX	134971730
cg19796532	0.530991201	-0.138842486	-5.210535573	1.56E-05	0.191042237	chr12	50426901
cg07013326	0.197362117	0.08674269	5.202157316	1.60E-05	0.191042237	chr6	57037090
cg18264486	0.814866139	-0.222866994	-5.167952656	1.75E-05	0.197791888	chr6	31650916
cg10499042	0.943534533	-0.027587165	-5.163175652	1.78E-05	0.197791888	chr2	141650127
cg01904243	0.330719707	-0.103568522	-5.157600618	1.80E-05	0.197791888	chr14	74251254