

# Supplementary figures and table for

## **DNA methylation dynamics in mouse preimplantation embryos revealed by mass spectrometry**

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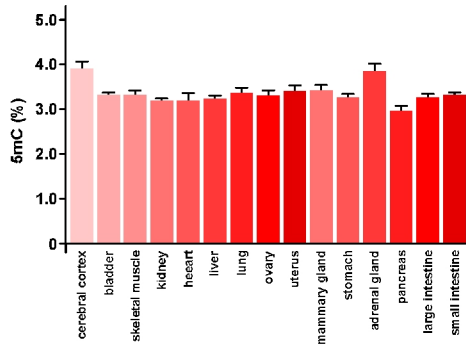
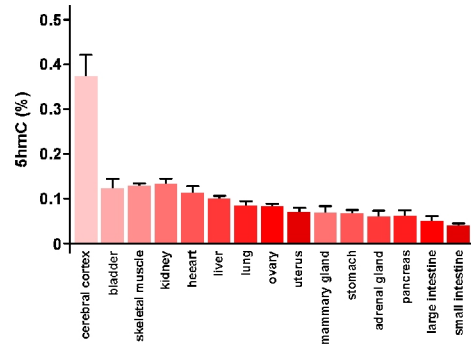
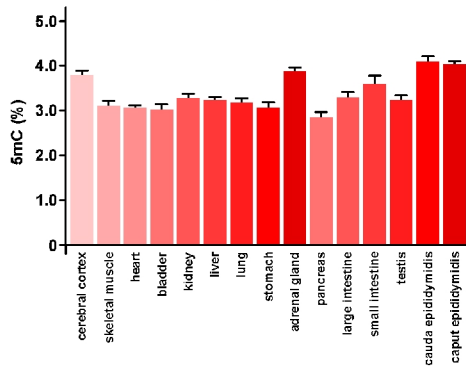
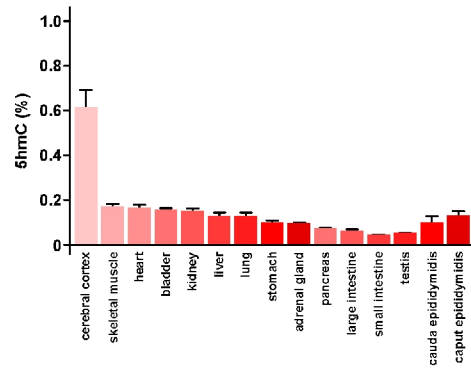
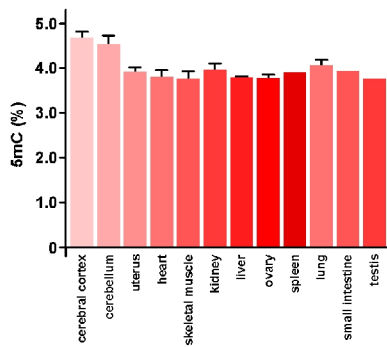
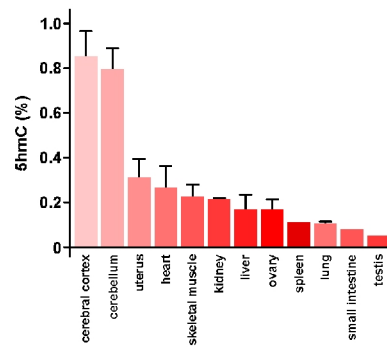
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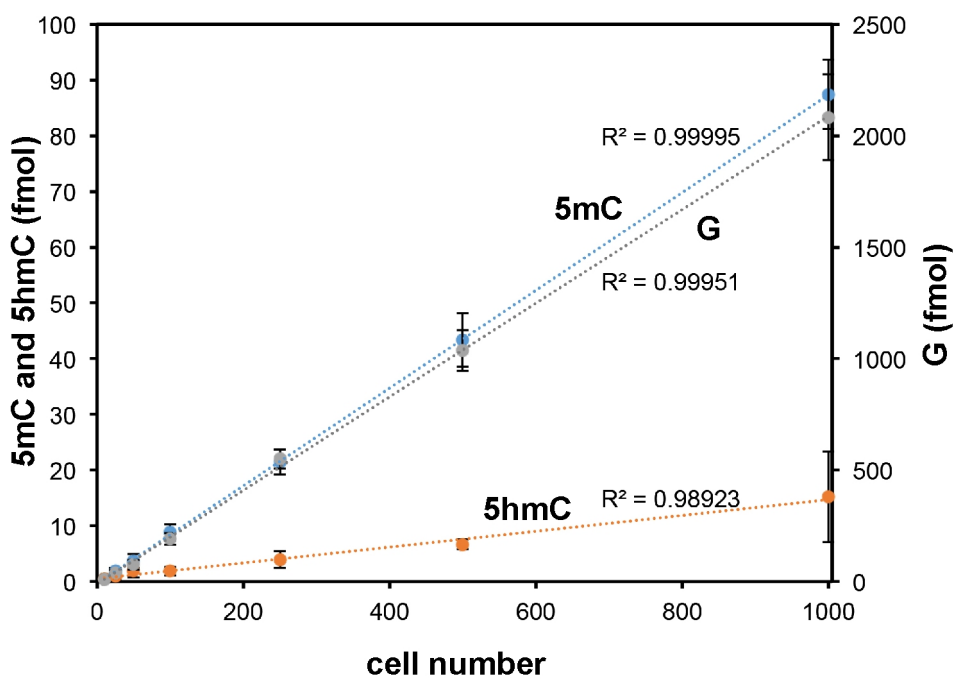
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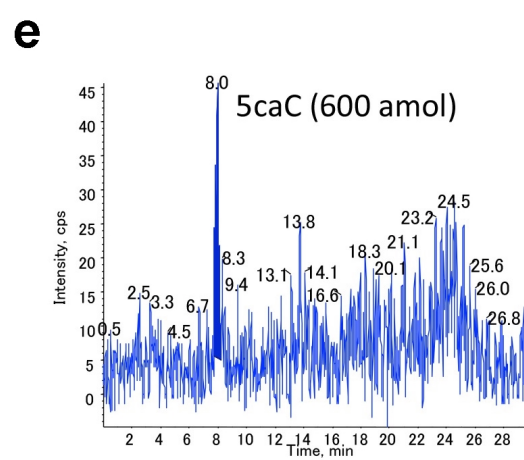
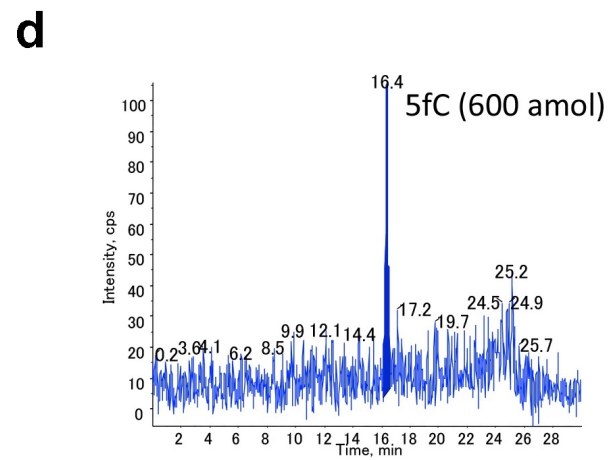
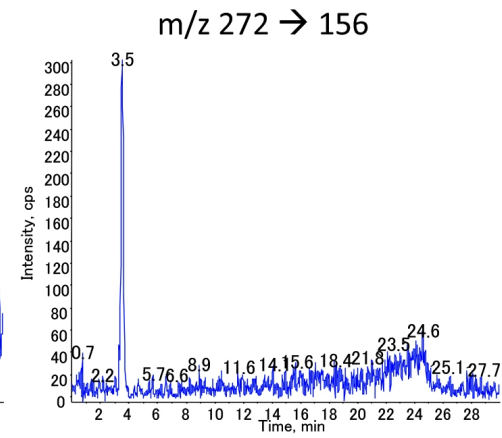
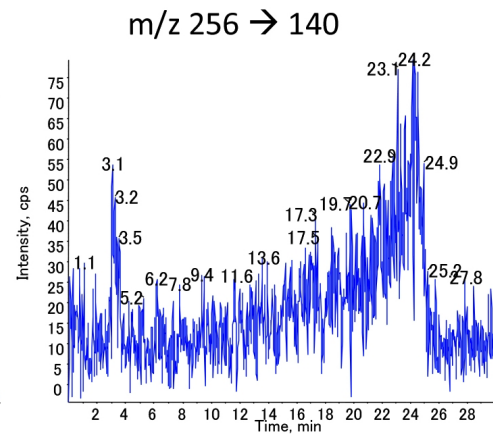
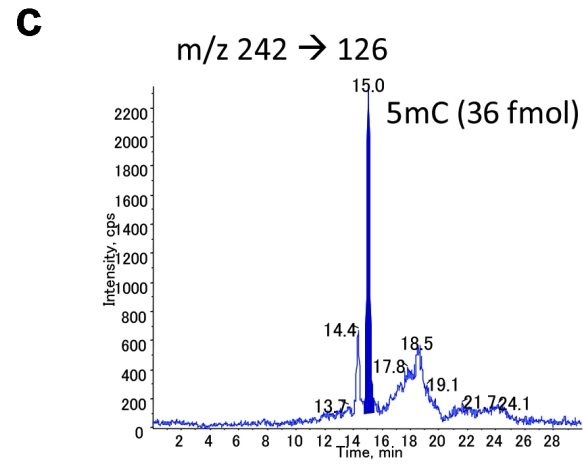
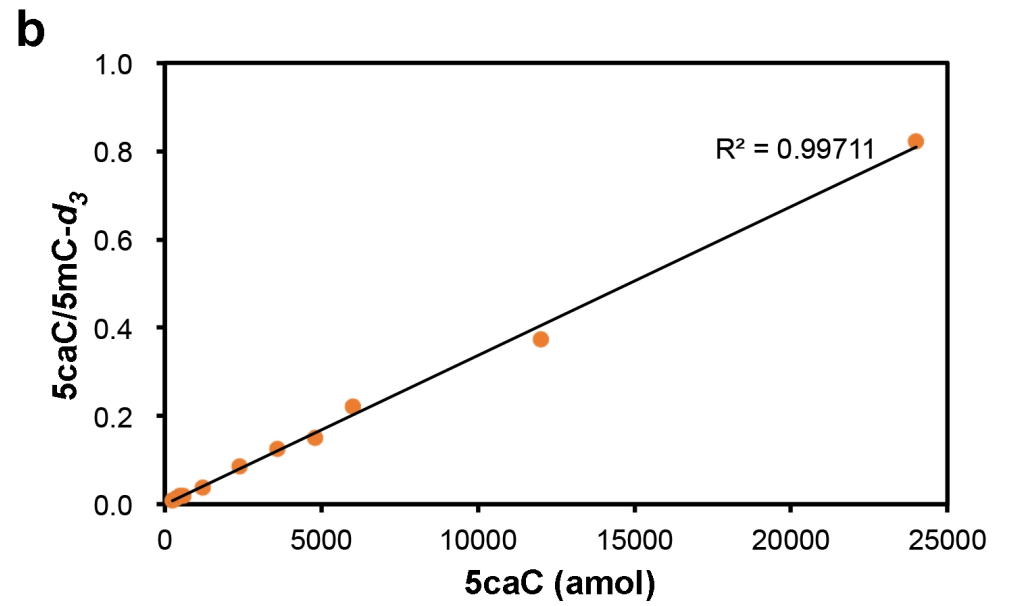
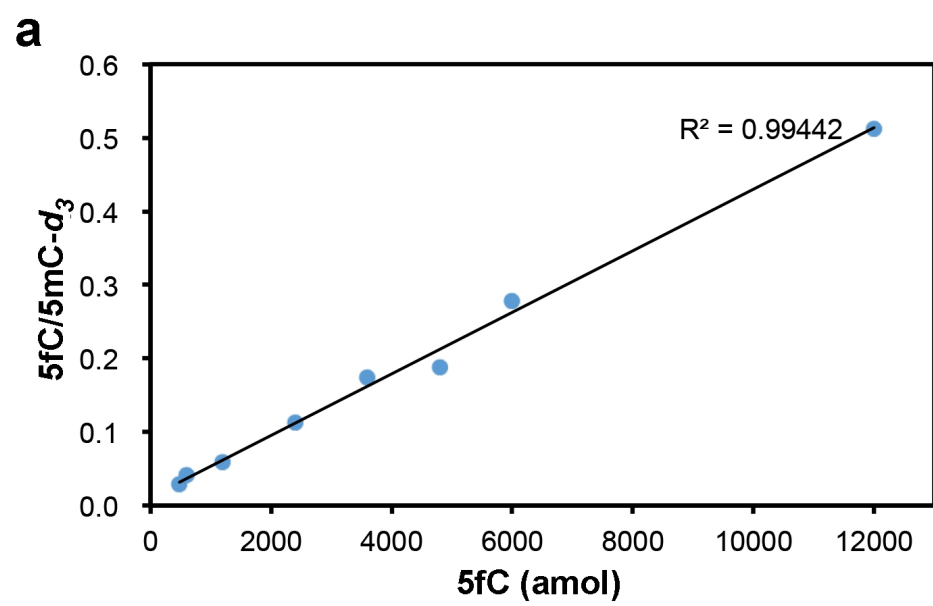
Figures S1 to S4

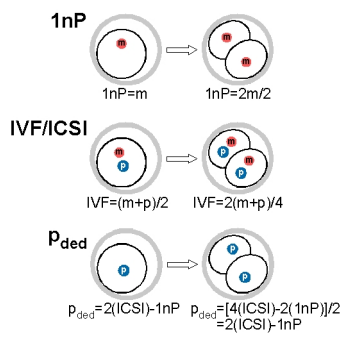
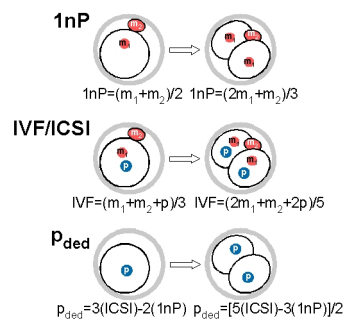
Figure Legends S1 to S4

Table S1

**a****mouse 5mC (female)****b****mouse 5hmC (female)****c****mouse 5mC (male)****d****mouse 5hmC (male)****e*****M. fascicularis* 5mC****f*****M. fascicularis* 5hmC**





**a****b**

**Supplementary Table S1 Values of 5-methyl-2'-deoxycytidine (5mC) and 5-hydroxymethyl-2'-deoxycytidine (5hmC)**

Sample	time (h) (stage)*	5mC		5hmC		Samples, <i>n</i>	embryos/sample ( <i>n</i> )
		mean	sd	mean	sd		
sperm	-	4.80	0.22	0.18	0.16	4	-
mII <sup>†</sup>	-	4.46	0.46	0.15	0.09	15	137, 110, 100, 101, 100, 123, 132, 132, 92, 120, 108, 100, 100, 100, 106
IVF	3	4.76	0.46	nd	-	3	100, 100, 106
	6	3.42	0.50	0.12	-	7	100, 100, 93, 104, 110, 107, 106
	10	2.89	0.20	0.07	0.02	6	100, 100, 100, 101, 121, 146
	24	2.82	0.25	nd	-	6	100, 100, 56, 74, 50, 42
	48	2.61	0.40	nd	-	4	16, 16, 15, 16
	72	1.85	0.16	nd	-	3	10, 10, 10
	96	1.10	0.08	nd	-	4	7, 7, 7, 8
	IVF+azaC	6	3.90	0.70	0.45	-	3
	24	2.27	0.17	0.10	-	3	50, 50, 50
	48	2.97	0.64	0.82	-	1	38
1nP	3	4.88	0.05	0.26	-	3	100, 100, 100
	6	3.97	0.62	nd	-	5	100, 100, 100, 100, 120
	24	3.06	0.58	nd	-	4	100, 100, 50, 100
1nP+azaC	6	3.62	0.25	nd	-	1	128
1nA	6	2.77	0.63	1.38	0.98	3	100, 100, 100
	24	2.11	0.78	nd	-	2	100, 100
ICSI	3	4.60	0.39	0.16	-	3	100, 100, 100
	6	3.44	0.23	0.12	0.05	5	100, 100, 100, 100, 150
	24	2.83	0.26	nd	-	3	100, 100, 100
natural mating	8 (1C)	3.45	0.21	0.19	0.09	3	235, 213, 150
	26 (2C)	2.86	0.23	0.16	0.06	3	130, 113, 93
	36 (4C)	2.71	0.30	0.11	0.03	3	50, 50, 50
	50 (8C)	2.15	0.12	0.22	0.06	4	30, 28, 28, 22
	72 (mor)	1.89	0.29	0.06	0.02	3	142, 23, 93
	84 (B)	1.44	0.35	0.05	0.00	4	38, 15, 15, 70
	98 (eB)	1.09	0.19	0.05	0.01	5	12, 25, 15, 151, 157
GV	-	4.69	0.70	nd	-	3	127, 121, 139
caput	-	4.03	0.08	0.21	0.00	5	-
cauda	-	4.08	0.15	0.19	0.01	5	-

Where  $n \leq 2$ , replicates are technical replicates. Sperm were from cauda epididymidis.

\*Estimated time in hours (h) after activation of development or sperm injection.

<sup>†</sup>Abbreviations: mII, metaphase II oocyte; IVF, *in vitro* fertilisation; nd, below detection threshold; azaC, 5-aza-2'deoxycytidine; 1nP, haploid parthenogenetic embryo; 1nA, haploid androgenetic embryo; ICSI, intracytoplasmic sperm injection; 1C-8C, 1- to 8-cell embryo; mor, morula; B, blastocyst; eB, expanded blastocyst; GV, germinal vesicle oocyte; caput, whole caput epididymidal tissue; cauda, whole cauda epididymidal tissue;