Supplemental Material for Online Posting

Table S1 and S2. Composition of the diet-low in methionine and lacking folic acid and choline fed to Fisher rats to make them folate and methyl deficient.

Ingredients	g/kg
Dyets Alcohol-Extracted Peanut Meal	90.0
Dyets Soy Protein Isolate	80.0
L-Cystine	2.0
L-methionine	1.8
Cellulose Fiber	10.0
Cornstarch	100.0
Dextrin	100.0
Sucrose	410.0
Vitamin free casein	10.0
AIN-76 mineral mix #200000	35.0
Primex (Hydrogenated Vegetable Oil)	100.0
Vitamin Mix *	10.0
Niacin/sucrose pre-mix (10mg/g)	3.0
Corn oil	50.0

*Used at 10g/kg Diet (Table S2).

Ingradient	g/kg	Ingradient	g/kg
Thiamine hydrochloride	0.60	Vitamin A palmitate (500, 000unit/g)	0.08
Riboflavin	0.60	Vitamin D3 (400,000U/g)	0.25
Pyridoxin hydrochloride	0.70	Vitamin E acetate (500U/g)	10.0
Calcium pantothenate	1.60	Menadione sodium bisulfite	0.08
Biotin	0.02	Sucorse (finely powdered)	984.35
Vitamin B-12	1.0		

Table S3. The primer sequence, product size and RT-PCR conditions for rat Dnmts, MBDs and GST-pi

mRNA	Primer Sequence	Annealing temperature	Product size
Dnmt1	F: 5'-G C T A A G G A C G A T G A T G A G A C G-3' R: 5'-C T T T T T G G G T G A C G G C A A C T C-3'	60ºC	447 bp
Dnmt3a	F: 5'-C A G C G T C A C A C A G A A G C A T A T C C-3' R: 5'-G G T C C T C A C T T T G C T G A A C T T G G-3'	60ºC	436 bp
Dnmt3b	F: 5'-G A A T T T G A G C A G C C C A G G T T G-3' R: 5'-A A G A A G A G C C T T C C T G T G C C-3'	60ºC	310 bp
MeCP2	F: 5'-A C T T C T C G T C A A G A T G C C T T T C C-3' R: 5'-T T T T C G C T T T C T G C C A G G G-3'	55ºC	112 bp
MBD1	F: 5'-A A G A T T C A G G G A A G C G G C A A G C-3' R: 5'-G A A G G T T G T G A C T G C T G T C C A C T C-3'	58ºC	239 bp
MBD2	F: 5'-G C C C A G G T A G T A A T	55ºC	210 bp

	G A T G A G A C C C-3’		
	R: 5’-G T T T C T T T C G G A C T T		
	G T T G G A C T C-3’		
MBD3	F: 5'-C G C T A T G A C T C C T C	59ºC	196 bp
	C A AC C A G G-3'		
	R: 5’-T G G C G G A C A G C A G C		
	G T C T C A T-3’		
MBD4	F: 5’-G G A A G A G T C C C T C A	57ºC	467 bp
	G A T T C T A C T G G-3’		
	R: 5’-C C T T T T T T C T A C C T G		
	T G T T C G T G G-3’		
GST-pi	F: 5’-G G G T C G C T C T T T A G	58ºC	392 bp
	G G C T T T A T G-3’		
	R: 5’-T G G G A C G G T T C A A A		
	T G G T C A G-3’		