Supplementary Materials

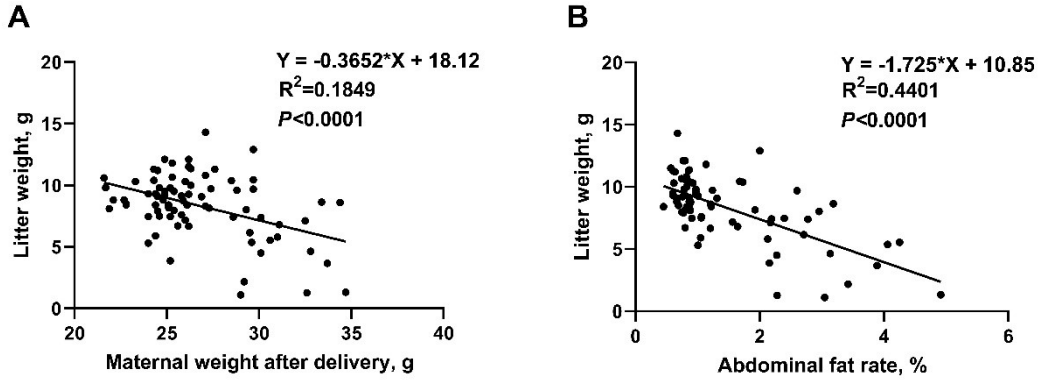
Supplementary Table 1. Composition of the experimental diets

Item		CTL		HFD	
		gm%	**kcal%**	**gm%**	**kcal%**
Protein		19.2	20	26.2	20
Carbohydrate		67.3	70	26.3	20
Fat		4.3	10	34.9	60
	Total		100		100
	kcal/gm	3.85		5.24	
Ingredient		**gm**	**kcal**	**gm**	**kcal**
Casein, 30 Mesh		200	800	200	800
L-Cystine		3	12	3	12
Corn Starch		506.2	2024.8	0	0
Maltodextrin 10		125	500	125	500
Sucrose		68.8	275.2	68.8	275.2
Cellulose, BW200		50	0	50	0
Soybean Oil		25	225	25	225
Lard*		20	180	245	2205
Mineral Mix S10026		10	0	10	0
DiCalcium Phosphate		13	0	13	0
Calcium Carbonate		5.5	0	5.5	0
Potassium Citrate, 1H2O		16.5	0	16.5	0
Vitamin Mix V10001		10	40	10	40
Choline Bitartrate		2	0	2	0
FD%C Yellow Dye #5		0.04	0	0	0
FD&C Blue Dye #1		0.01	0	0.05	0
Total		773.85	4057	773.85	4057

*Typical analysis of cholesterol in lard = 0.72 mg/gram.

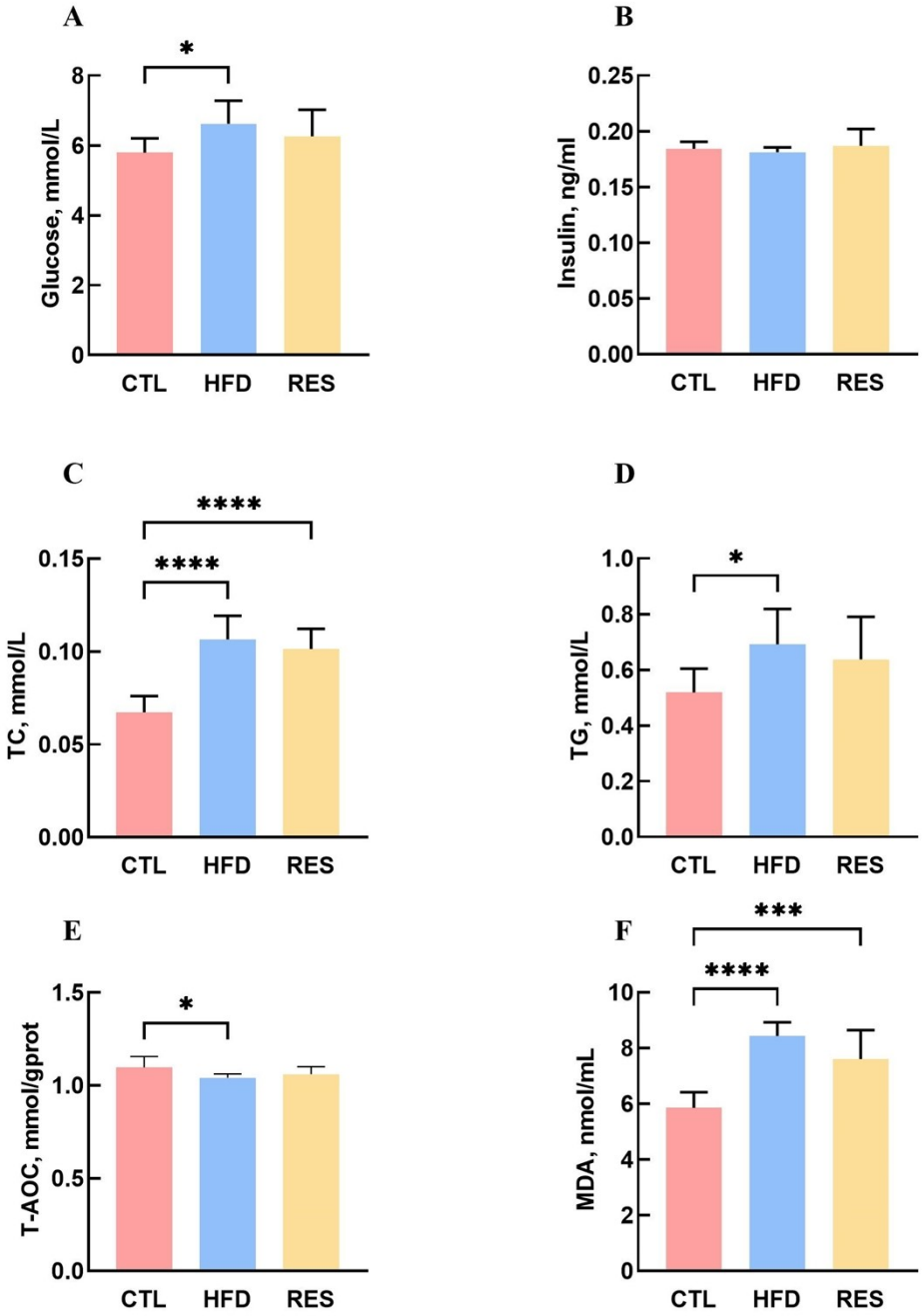
Cholesterol (mg)/4057 kcal = 216.4

Cholesterol (mg)/kg = 279.6



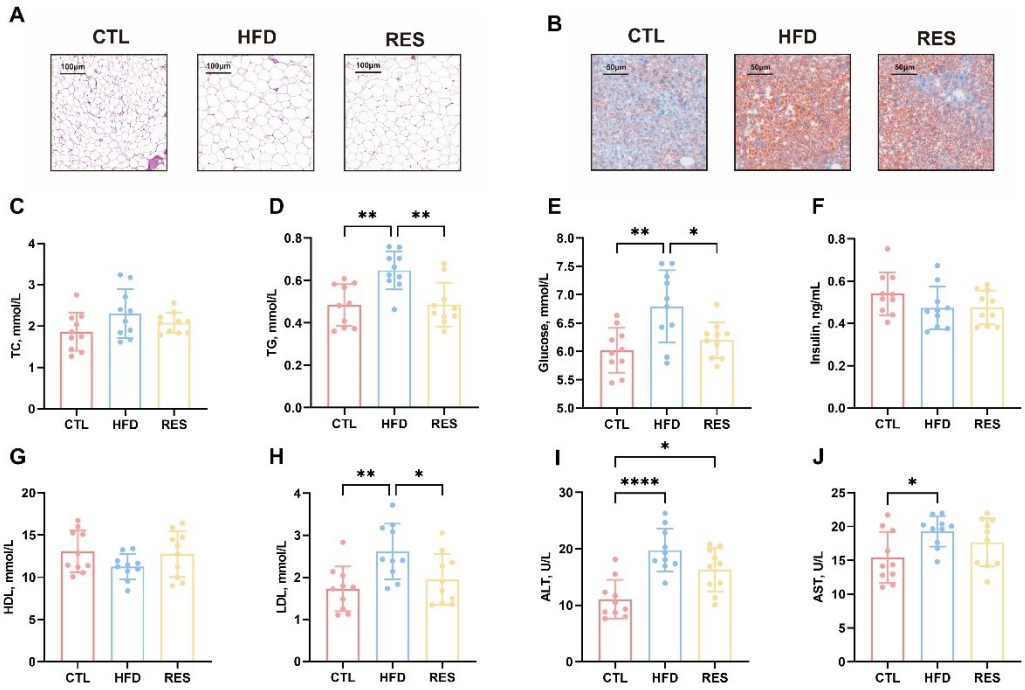
Supplementary Fig 1. Linear regression analysis of maternal weight and litter weight, abdominal

fat rate and litter weight after delivery. The linear regression analysis of maternal weight after delivery and litter weight (A), abdominal fat rate and litter weight (B). *P<0.05, **P<0.01, ***P<0.001, ****P<0.0001.

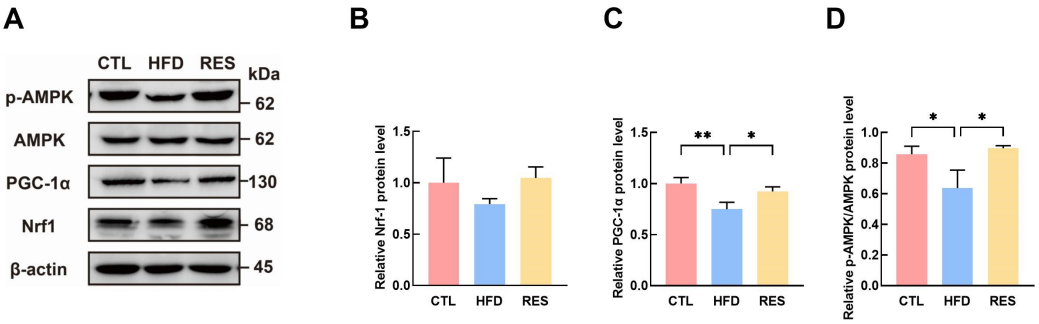


Supplementary Fig 2. Effect of resveratrol on serum biochemical indicators in short-term high-fat diet induced mice. Serum levels of glucose (A), insulin (B), total cholesterol (TC) (C), triglyceride (TG)

(D), the total antioxidant capacity (T-AOC) (E) and malondialdehyde (MDA) (F) in short-term high-fat diet induced mice. CTL, a control group; HFD, a high-fat diet; RES, a high-fat diet containing 500 mg/kg resveratrol. *P<0.05, **P<0.01, ***P<0.001, ****P<0.0001. n=9.



Supplementary Fig 3. Effect of resveratrol on fat deposition and serum biochemical indicators in long-term high-fat diet induced mice. Effect of resveratrol on fat deposition and serum biochemical indicators of long-term high-fat diet induced mice. The abdominal fat HE staining (A) and oil red O staining (B) in long-term high-fat diet induced mice, serum levels of total cholesterol (TC) (C), triglyceride (TG) (D), glucose (E), insulin (F), low-density lipoprotein (LDL) (G), high-density lipoprotein (HDL) (H), alanine aminotransferase (ALT) (I), and aspartate aminotransferase (AST) (J) in long-term high-fat diet induced mice. CTL, a control group; HFD, a high-fat diet; RES, a high-fat diet containing 500 mg/kg resveratrol. *P<0.05, **P<0.01, ***P<0.001, ****P<0.0001. n=10.



Supplementary Fig 4. Effect of resveratrol on mitochondrial biogenesis, function and energy metabolism in uterus of short-term high-fat diet induced mice. Effect of resveratrol on mitochondrial biogenesis, function, and energy metabolism in uterus of short-term high-fat diet induced mice. Effect of resveratrol on the protein expression levels of phosphorylated adenosine 5'-monophosphate (AMP)-activated protein kinase (p-AMPK), peroxisome proliferator-activated receptor γ coactivator-1α (PGC-1α), and nuclear respiratory factors-1 (Nrf-1) (A-D) in short-term high-fat diet induced mice uterus. CTL, a control group; HFD, a high-fat diet; RES, a high-fat diet containing 500 mg/kg resveratrol. **P*<0.05, ***P*<0.01, ****P*<0.001, *****P*<0.0001. n=3.