

Table S1. Scoring general condition of mice.

Observation indicators	Score – Description
Appearance	0 – Shiny and smooth hairs 1 – Some hairs erect 2 – All hairs on the back erect 3 – Fluffy and messy hairs 4 – Haggard
Activity	0 – Active 1 – Active and not upright 2 – Less active, sluggish but still able to walk 3 – Active after provocation and tremulous 4 – Inactive after provocation
Autonomic activities	0 – Normal (feeding, drinking, climbing, walking, fighting, etc.) 1 – Reduced activity with movement only at the bottom of the cage 2 – Markedly reduced activity with stillness and occasional exploratory activity 3 – Standing still 4 – Standing still and tremulous (especially the hind limb)
Response to stimuli	0 – Responsive 1 – Slow or no response to sounds but quick response to touch (flee immediately) 2 – No response to sounds and common response to touch (take a few steps) 3 – No response to sounds and slow response to touch (stand still) 4 – No response to sounds and almost no response to touch (unable to turn over after being pushed)
Eye closure and secretions	0 – Fully open 1 – Not fully open with possible discharge 2 – Half open with possible discharge 3 – Not fully closed with possible discharge 4 – Fully closed or with significant discharge (cloudy)
Respiratory rate	0 – Normal 1 – Slight reduction (can't be counted with the naked eyes) 2 – Moderate reduction (can barely be counted with the naked eyes) 3 – Significant reduction (can easily be counted with the naked eyes with a breathing interval of 0.5 sec) 4 – Extreme reduction (breathing intervals > 1 sec)
Respiratory quality	0 – Normal 1 – Intermittent dyspnea 2 – Dyspnea without panting 3 – Dyspnea with intermittent panting 4 – Panting

Table SII. Mean weight of surviving embryo.

Group	N	Mean embryo weight, g	F	P
Control	13	0.0267±0.0019		
Model	5	0.0174±0.0008 ^a		
QUE	13	0.0258±0.0025 ^c	24.572	<0.0001
LDQ	11	0.0200±0.0027 ^{a, e}		
MDQ	6	0.0205±0.0023 ^{a, f}		
HDQ	8	0.0218±0.0014 ^{b, d, f}		

^aP<0.0001 and ^bP<0.001 vs. Control group; ^cP<0.0001 and ^dP<0.05 vs. the Model; ^eP<0.0001 and ^fP<0.01 vs. the QUE group. Control, the control group; HDQ, high-dose quercetin; LDQ, the low-dose quercetin group; MDQ, the medium-dose quercetin; QUE, the quercetin + PBS group.

Table SIII. The litter size and birthweight of the pups.

Group	N	Littersize /n	Birthweight of the pups /g	Mean birthweight of the pups /g
Control	3	12.00±1.00	19.47±1.01	1.63±0.05
Model	3	11.67±3.06	20.23±4.03	1.75±0.14
QUE	3	13.33±1.53	23.17±1.85	1.75±0.16
LDQ	3	14.00±1.73	23.83±2.20	1.71±0.06
MDQ	3	12.00±0.00	19.83±0.31	1.65±0.03
HDQ	3	12.33±1.53	19.57±2.39	1.59±0.04
<i>F</i>	-	0.830	2.195	1.538
<i>P</i>	-	0.553	0.123	0.250

HDQ, high-dose quercetin group; LDQ, the low-dose quercetin group; MDQ, the medium-dose quercetin group; Model, the model group; QUE, the quercetin + PBS group.

Table SIV. Targets having higher degree value than the average value.

Gene	Protein Name	Degree
ALB	Albumin	61
AKT1	RAC-alpha serine/threonine-protein kinase	48
CASP3	Caspase-3	42
MMP9	Matrix metalloproteinase-9	38
IGF1	Insulin-like growth factor I	37
HRAS	GTPase HRas	36
HSP90AA1	Heat shock protein HSP 90-alpha	36
ESR1	Estrogen receptor	32
PPARG	Peroxisome proliferator-activated receptor gamma	31
NOS3	Nitric oxide synthase, endothelial	26
KDR	Vascular endothelial growth factor receptor 2	26
MAPK14	Mitogen-activated protein kinase 14	25
IL2	Interleukin-2	24
STAT1	Signal transducer and activator of transcription 1-alpha/beta	23
CCL5	C-C motif chemokine 5	21
F2	Prothrombin	21
JAK2	Tyrosine-protein kinase JAK2	21
PGR	Progesterone receptor	20
KIT	Mast/stem cell growth factor receptor Kit	20
ACE	Angiotensin-converting enzyme	19
AR	Androgen receptor	19
NOS2	Nitric oxide synthase, inducible	18
SELE	E-selectin	18
REN	Renin	18
LGALS3	Galectin-3	18
CDC42	Cell division control protein 42 homolog	18
SOD2	Superoxide dismutase [Mn], mitochondrial	17
CTSB	Cathepsin B	17
SELP	P-selectin	17
PARP1	Poly [ADP-ribose] polymerase 1	17
MMP3	Stromelysin-1	16
CASP1	Caspase-1	15
PLAU	Urokinase-type plasminogen activator	15
XIAP	X-linked inhibitor of apoptosis protein	15

Table SV. Relative mRNA expression of AKT1, ESR1, JAK2, MAPK1, MAPK3, PGR, PI3K and SGK1.

Group	AKT1	ESR1	JAK2	MAPK1	MAPK3	PGR	PI3K	SGK1
Control	1.09±0.08	0.74±0.11	1.02±0.11	1.04±0.04	0.92±0.09	1.23±0.07	1.37±0.34	1.11±0.15
Model	0.69±0.03 ^d	1.15±0.15 ^a	1.16±0.21	0.63±0.06 ^a	1.52±0.20 ^c	0.57±0.06 ^c	0.99±0.24	0.40±0.03 ^b
QUE	1.02±0.09 ^g	0.70±0.04 ^f	1.11±0.03	1.11±0.12 ^e	0.99±0.12 ^f	1.05±0.14 ^f	1.16±0.07	1.19±0.12 ^g
LDQ	1.04±0.09 ^g	1.01±0.21	1.49±0.07 ^a	0.98±0.07 ^e	1.01±0.09 ^f	1.55±0.14 ^h	1.67±0.18	1.41±0.14 ^h
MDQ	1.18±0.01 ^h	1.08±0.06 ^a	1.23±0.22	1.22±0.05 ^f	1.10±0.08 ^f	1.51±0.19 ^h	1.99±0.27 ^f	1.68±0.25 ^{b, h}
HDQ	0.86±0.05 ^b	0.84±0.05	1.14±0.07	1.19±0.24 ^f	0.85±0.08 ^g	0.94±0.04 ^e	1.44±0.31	1.63±0.02 ^{b, h}

^aP<0.05, ^bP<0.01, ^cP<0.001 and ^dP<0.0001 vs. Control group; ^eP<0.05, ^fP<0.01, ^gP<0.001 and ^hP<0.0001 vs. the Model group. ESR, estrogen receptor; MAPK, mitogen-activated protein kinase; PGR, progesterone receptor; PI3K, phosphatidylinositol 3-kinase; SGK1, serum- and glucocorticoid-inducible kinase 1; HDQ, the high-dose quercetin group; LDQ, low-dose quercetin group; MDQ, the medium-dose quercetin group; Model, the model group; QUE, the quercetin + PBS.