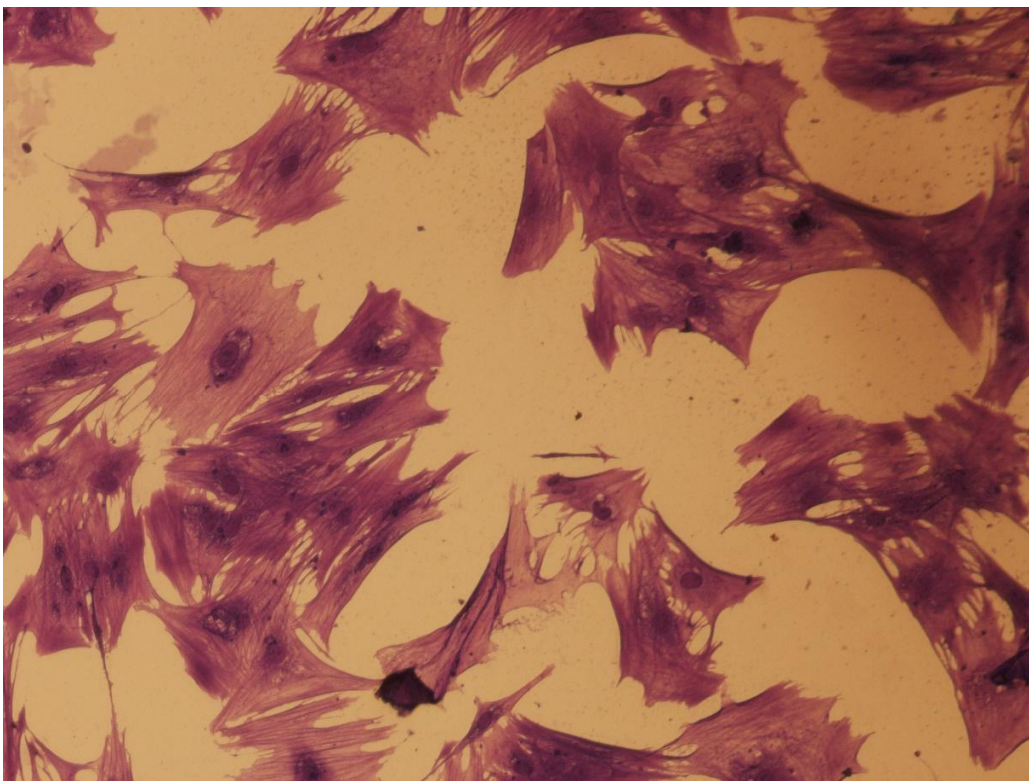
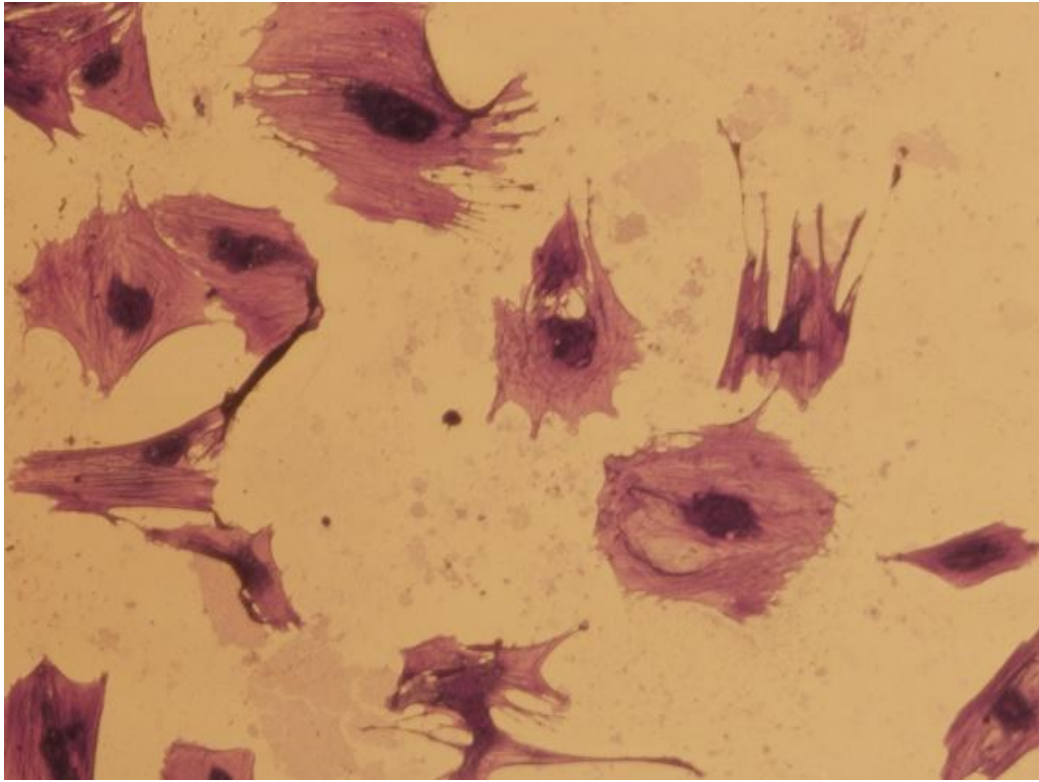


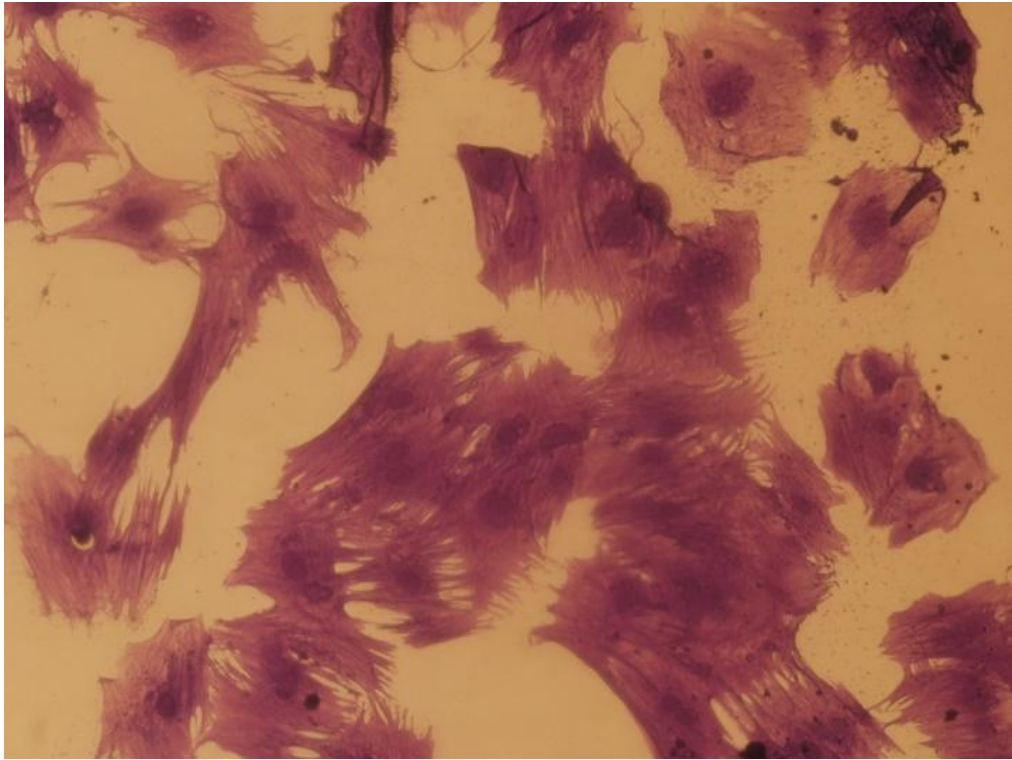
a) Control DFAT cells for at 24 hours



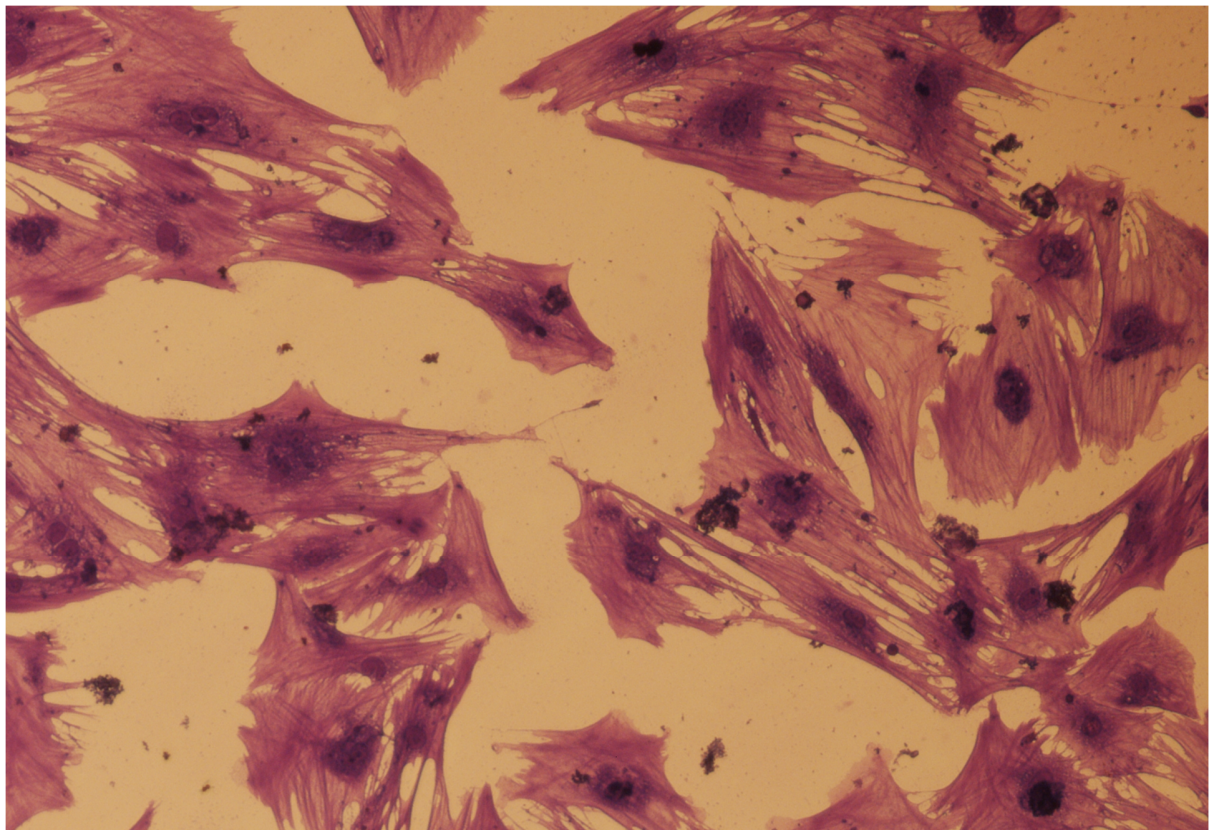
b) 100μM resveratrol treatment of DFAT cells at 24 hours



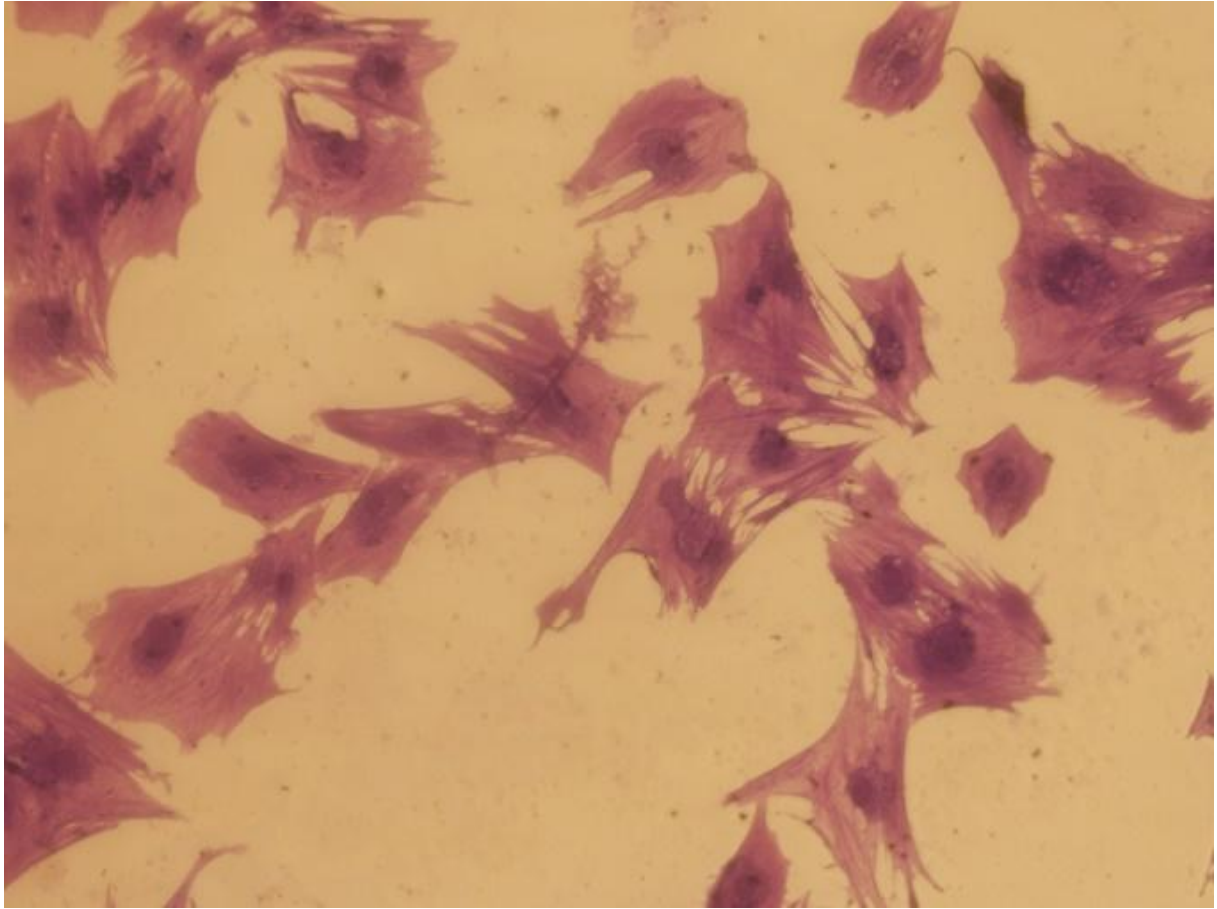
c) 200 μ M resveratrol treatment of DFAT cells at 24hours



d) Control DFAT cells at 48hours

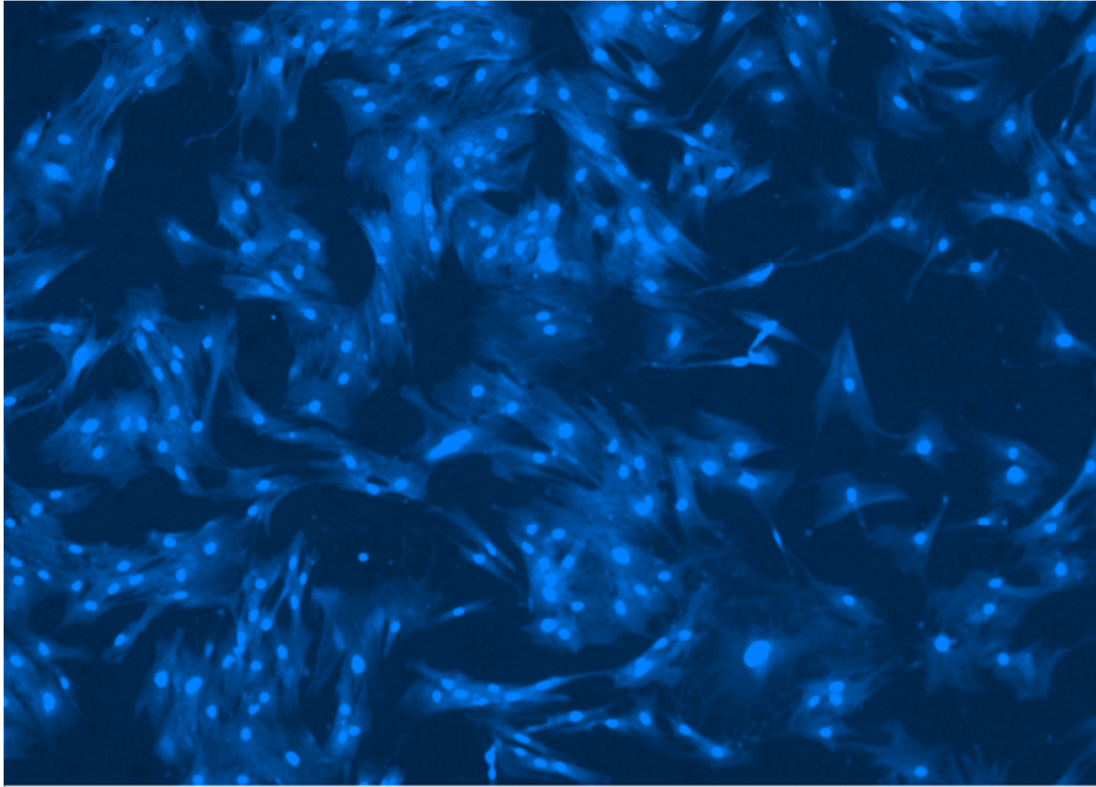


e) 100 μ M resveratrol treatment of DFAT cells at 48hours

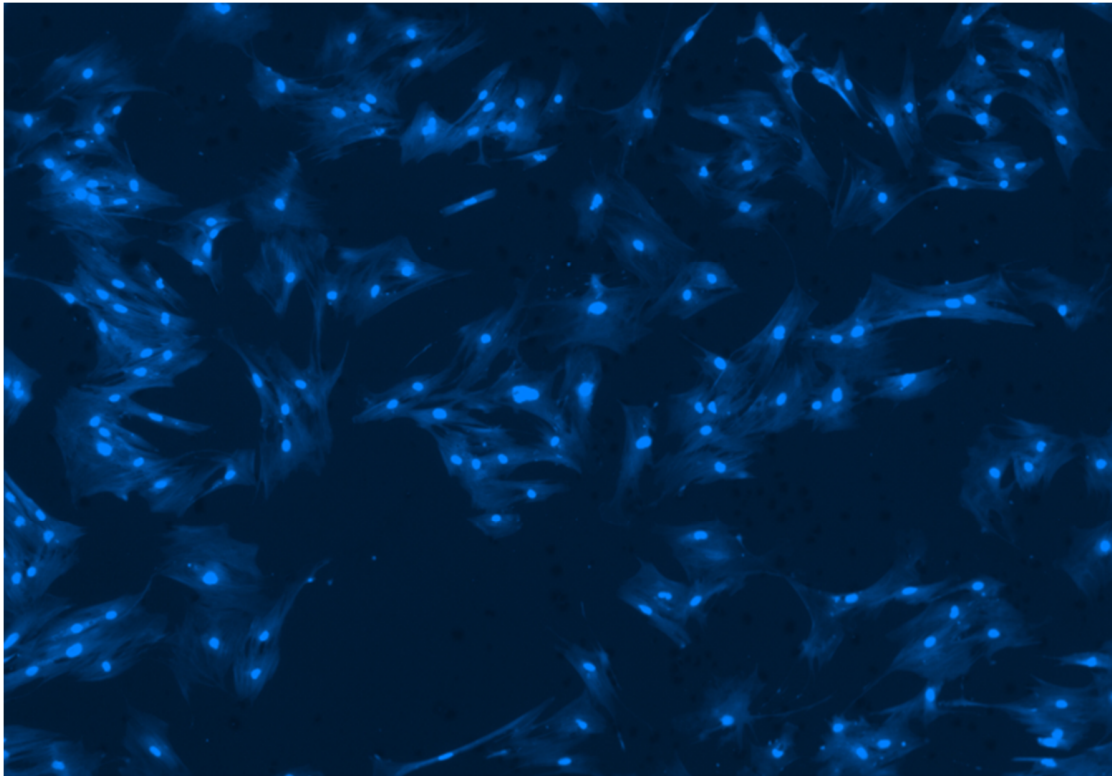


f) 200 μ M resveratrol treatment of DFAT cells at 48hours

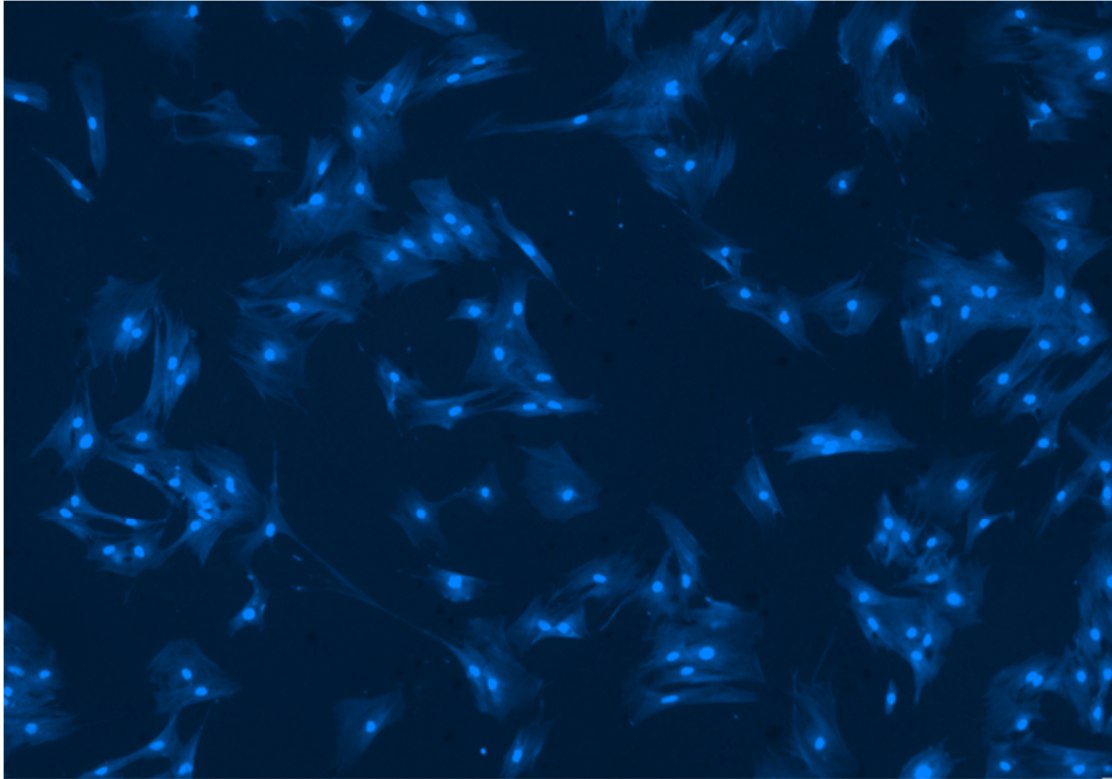
Supplementary Figure S1: Treatment of RSV at different concentrations of DFAT cells



a) DAPI staining of control DFAT cells



b) DAPI staining of DFAT cells treated with 100 μ M resveratrol



c) DAPI staining of DFAT cells treated with 200 μ M resveratrol

Supplementary Figure S2: Cell viability of RSV treatment at 100 μ M and 200 μ M by DAPI staining

Supplementary Table S1: RSV effect on the MDA and ORAC levels in DFAT cells

	Control	RSV treatment		P-value	
		100μM	200μM	100μM	200μM
MDA	54.569 ± 3.0	43.771 ± 2.1	41.944 ± 2.9	0.01	0.05
ORAC	151.982 ± 2.0	155.637 ± 1.9	157.210 ± 2.1	0.008	0.008

Supplementary Table S2: RSV effect on the Relative quantification (RQ) of different genes expression under short and long heat stress

<i>Gene</i>	Isothermal		Short Heat Stress		Long Heat Stress		P-value		
	Control	RSV	Control	RSV	Control	RSV	HS	RSV	HS × RSV
Oxidative stress									
<i>STIP1</i>	1.00±0.74	3.93±0.66	1.0±0.72	3.9±0.68	4.17±0.70	7.33±0.73	0.0001	0.0008	0.97
<i>SOD1</i>	1.00±0.29	0.49±0.28	1.11±0.35	0.86±0.29	1.13±0.28	0.550±0.31	0.66	0.21	0.81
<i>HSF1</i>	1.00±0.12	1.02±0.11	0.89±0.12	0.81±0.11	1.09±0.11	0.95±0.12	0.21	0.64	0.74
Lipid metabolism									
<i>LIPE</i>	1.00±0.28	1.78±0.27	0.67±0.29	1.51±0.27	0.29±0.26	0.86±0.29	0.009	0.02	0.86
<i>MGLL</i>	1.00±0.21	1.34±0.20	0.80±0.22	0.80±0.20	0.59±0.20	0.62±0.21	0.01	0.60	0.6
<i>PLIN</i>	1.00±0.39	2.44±0.37	0.72±0.41	2.2±0.39	0.88±0.37	2.1±0.41	0.80	0.002	0.93
<i>FASN</i>	1.00±0.09	0.45±0.09	1.03±0.09	0.40±0.09	0.78±0.09	0.42±0.10	0.33	0.0001	0.28
Apoptosis									
<i>BAD</i>	1.00±0.13	1.15±0.13	0.88±0.14	1.04±0.13	0.66±0.13	0.96±0.14	0.13	0.20	0.80
<i>BAX</i>	1.00±0.18	2.07±0.18	0.72±0.19	1.72±0.18	1.11±0.18	1.88±0.19	0.1415	0.0001	0.62
<i>PCNA</i>	1.00±0.12	0.44±0.11	0.95±0.12	0.25±0.11	0.57±0.11	0.06±0.12	0.002	0.0001	0.65

Inflammation									
<i>CCL2</i>	1.00±0.14	0.36±0.14	0.60±0.15	0.12±0.14	0.88±0.14	0.14±0.15	0.06	0.0006	0.63
<i>IL1-β</i>	1.00±0.53	1.08±0.51	0.72±0.55	0.84±0.53	0.90±0.51	1.04±0.56	0.85	0.85	0.99
SIRT1 signaling									
<i>SIRT1</i>	1.00±0.18	0.88±0.18	0.91±0.19	0.71±0.18	0.79±0.17	0.80±0.19	0.65	0.63	0.82
<i>FOXO1</i>	1.00±0.19	0.98±0.18	0.77±0.19	0.77±0.18	0.78±0.18	0.83±0.19	0.39	0.95	0.98
<i>FOXO3</i>	1.00±0.16	0.71±0.17	0.94±0.17	0.52±0.16	1.06±0.16	0.67±0.17	0.62	0.06	0.88
<i>PPARγ</i>	1.00±0.28	1.05±0.26	0.87±0.29	0.65±0.27	0.70±0.26	0.62±0.29	0.34	0.78	0.85

