

Supplementary Table 1: IAD modeling TEWL (g/h·m²)

Control	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6
Day 0	14	10.19	10.88	12.23	8.93	10.14
Day 1	14.94	12.8	11.36	13.62	14.94	14.19
Day 2	13.24	9.06	12.02	13.91	10.99	10.61
Day 3	9.26	12.95	10.65	11.93	9.05	11.23
IAD modeling	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6
Day 0	11.6	10.74	11.29	9.19	12.09	11.94
Day 1	19.61	29.84	35.06	22.05	38.92	45.74
Day 2	44.02	64.11	52.75	65.49	58.17	69.45
Day 3	63.4	69.23	73.7	54.06	71.88	52.36

Supplementary Table 2: Inflammatory factor concentration (pg/ml) of IAD modeling

Control	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6
IL-1 β	19.25	23.72	23.63	20.35	16.06	18.06
IL-6	18.96	16.59	23.87	13	23.47	15.75
TNF- α	21.89	14.46	30.72	16.51	30.89	28.34
IFN- γ	48.4	43.89	28.23	48.9	38.41	24.33
IAD modeling	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6
IL-1 β	81.97	91.27	112.29	76.69	88.86	99.56
IL-6	136.24	148.69	132.66	121.71	120.93	148.65
TNF- α	184.38	114.27	87.02	94.91	154.93	121.51
IFN- γ	113.42	102.26	67.78	72.39	91.14	80.75

Supplementary Table 3: Number of nucleated cells of IAD modeling

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6
Control	67	85	75	59	80	62
IAD modeling	182	314	271	208	255	176

Supplementary Table 4: Quercetin treatment TEWL (g/h·m²)

NC	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6
Day 0	71.39	69.12	83.18	57.16	75.97	78.52
Day 1	64.83	62.74	75.94	72.66	77	71.69

Day 3	54	67.16	53.13	50.17	55.72	52.33
Day 5	58.58	48.38	52.67	46.54	56.74	46.56
Quercetin 25 mg/kg	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6
Day 0	73.02	74.6	60.23	68.25	75.39	74.14
Day 1	69.25	51.84	55.27	50.57	63.12	60.68
Day 3	43.8	58.13	57.39	49.25	45.67	52.42
Day 5	44.29	44.85	47.15	48.23	43.28	40.13
Quercetin 50 mg/kg	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6
Day 0	82.85	59.62	71.32	62.55	64.64	79.59
Day 1	39.97	43.7	53.08	47.19	54.01	39.69
Day 3	44.58	25.54	36.56	34.81	29.75	31.3
Day 5	22.99	16.08	27.98	28.2	25.89	32.82
Quercetin 100 mg/kg	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6
Day 0	77.3	88.6	65.43	57.86	74.44	68.59
Day 1	55.35	48.18	45.5	47.64	46.41	49.94
Day 3	23.49	18.23	38.63	43.94	27.1	37.83
Day 5	16.31	24.89	36.2	29.89	35.07	20.1

Supplementary Table 5: Inflammatory factor concentration (pg/ml) of quercetin treatment

NC	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6
IL-1β	85.58	73.02	89.83	71.35	71.09	79.65
IL-6	108.99	118.95	126.13	87.37	96.74	118.92
TNF-α	117.50	91.42	89.62	85.93	103.94	97.21
IFN-γ	90.74	89.81	118.22	113.91	82.91	104.60
Quercetin 25 mg/kg	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6
IL-1β	76.75	83.77	88.82	61.53	68.13	93.75
IL-6	73.88	64.38	59.03	53.47	87.28	68.46
TNF-α	63.90	68.25	83.26	80.22	51.35	73.66
IFN-γ	44.29	44.85	47.15	48.23	43.28	40.13
Quercetin 50 mg/kg	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6
IL-1β	36.43	40.56	49.91	34.08	29.49	34.25
IL-6	40.55	66.08	60.07	48.54	53.75	66.07
TNF-α	61.95	50.79	38.68	42.18	38.86	34.00
IFN-γ	40.41	49.89	55.68	43.28	40.51	58.11
Quercetin 100 mg/kg	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6

IL-1β	35.84	37.13	33.55	30.11	27.35	25.94
IL-6	50.46	37.46	40.27	60.38	38.80	48.17
TNF-α	35.01	36.88	49.92	43.31	33.16	36.78
IFN-γ	44.88	55.81	51.74	45.51	36.68	50.20

Supplementary Table 6: Number of nucleated cells of quercetin treatment

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6
NC	198	304	269	248	235	194
Quercetin 25 mg/kg	244	187	161	149	242	205
Quercetin 50 mg/kg	107	92	80	124	75	95
Quercetin 100 mg/kg	63	108	99	70	86	114

Supplementary Table 7: Number of F4/80 positive cells of quercetin treatment

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6
NC	88	94	79	84	75	66
Quercetin 25 mg/kg	44	47	61	58	52	35
Quercetin 50 mg/kg	57	32	60	64	45	55
Quercetin 100 mg/kg	36	38	49	50	46	54

Supplementary Table 8: Ratio of TUNEL positive cells of quercetin treatment (%)

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6
NC	32.4	16.8	25.5	27.9	30.1	22.6
Quercetin 25 mg/kg	14.3	7.2	11.5	18.6	12.1	5.8
Quercetin 50 mg/kg	1.7	3.2	2.6	1.6	3.5	2.5
Quercetin 100 mg/kg	1.6	1.8	2.9	1.5	2.6	3.4

Supplementary Figure 1: Full-length gels and blots

