

Table S1. Circadian parameters of liver clock genes.

			<i>p</i>	amplitude	<i>p</i> (amplitude)	acrophase (h)	<i>p</i> (acrophase)	MESOR
<i>Bmal1</i>	ZT0	STD-VH	0.000	0.488	0.000	0.566	0.011	0.478
		CAF-VH	0.000	0.579	0.000	0.187	0.000	0.553
		CAF-GSPE	0.000	0.591	0.000	0.59	0.518	0.59
	ZT12	STD-VH	0.000	0.479	0.000	22.638	0.007	0.394
		CAF-VH	0.000	0.446	0.000	1.51	0.111	0.477
		CAF-GSPE	0.001	0.369	0.000	23.055	0.000	0.326
<i>Cry1</i>	ZT0	STD-VH	0.001	0.503	0.000	20.629	0.000	0.742
		CAF-VH	0.000	0.615	0.000	21.272	0.000	0.816
		CAF-GSPE	0.000	0.672	0.000	21.1	0.000	0.856
	ZT12	STD-VH	0.001	0.753	0.000	18.664	0.000	0.969
		CAF-VH	0.000	0.497	0.000	21.09	0.000	0.705
		CAF-GSPE	0.000	0.753	0.000	18.577	0.000	0.71
<i>Per2</i>	ZT0	STD-VH	0.003	0.807	0.000	16.58	0.000	1.295
		CAF-VH	0.000	1.205	0.000	16.017	0.000	1.762
		CAF-GSPE	0.000	1.293	0.000	16.58	0.000	1.651
	ZT12	STD-VH	0.000	1.407	0.000	16.304	0.000	2.067
		CAF-VH	0.000	2.264	0.000	13.519	0.000	3.035
		CAF-GSPE	0.000	1.408	0.000	15.271	0.000	1.719
<i>Nr1d1</i>	ZT0	STD-VH	0.004	22.855	0.000	11.207	0.000	16.15
		CAF-VH	0.000	34.868	0.000	9.386	0.000	25.125
		CAF-GSPE	0.000	30.889	0.000	9.692	0.000	22.919
	ZT12	STD-VH	0.000	36.283	0.000	8.038	0.000	23.206
		CAF-VH	0.001	34.974	0.000	8.312	0.000	23.648
		CAF-GSPE	0.000	23.224	0.000	10.424	0.000	17.181
<i>Ror-α</i>	ZT0	STD-VH	0.184	0.174	0.049	20.905	0.000	0.921
		CAF-VH	0.000	0.376	0.000	16.541	0.000	0.961
		CAF-GSPE	0.000	0.42	0.000	21.71	0.000	1.078
	ZT12	STD-VH	0.020	0.261	0.001	19.361	0.000	0.56
		CAF-VH	0.307	0.128	0.107	7.621	0.001	0.623
		CAF-GSPE	0.046	0.225	0.005	21.231	0.000	0.431
<i>Nampt</i>	ZT0	STD-VH	0.001	2.523	0.000	14.497	0.000	2.495
		CAF-VH	0.003	3.915	0.000	14.361	0.000	4.3
		CAF-GSPE	0.031	2.493	0.002	16.522	0.000	3.437
	ZT12	STD-VH	0.062	0.624	0.008	17.284	0.000	1.26
		CAF-VH	0.003	1.295	0.000	13.401	0.000	1.576
		CAF-GSPE	0.001	1.224	0.000	14.488	0.000	1.26

Rats fed with standard diet (STD) or cafeteria diet (CAF) were daily dosage with vehicle or grape seed procyanidins extract (GSPE) in the morning (ZT0) or at night (ZT12) and after 9 weeks were sacrificed at 9 a.m. (ZT1), 3 p.m. (ZT7), 9 p.m. (ZT13) or 3 a.m. (ZT19). Acrophase is the time at which the peak of a rhythm occurs (h); Amplitude is the difference between the peak and the mean value of a wave; MESOR is a circadian rhythm-adjusted mean. The values are the estimation of circadian parameters obtained by Cosinor method. The statistically significant p-values ($p < 0.05$) are highlighted in bold.

Table S2. Comparison of circadian parameters of liver clock genes between groups.

			<i>p</i>	d_amplitude	<i>p</i> (d_amplitude)	d_acrophase	<i>p</i> (d_acrophase)
<i>Bmal1</i>	ZT0	STD-VH vs. CAF-VH	0.000	0.091	0.149	0.099	0.406
		CAF-VH vs. CAF-GSPE	0.000	0.012	0.845	-0.106	0.278
	ZT12	STD-VH vs. CAF-VH	0.000	-0.033	0.689	5.531	0.000
		CAF-VH vs. CAF-GSPE	0.000	-0.077	0.419	-5.64	0.000
<i>Cry1</i>	ZT0	STD-VH vs. CAF-VH	0.000	0.113	0.369	-0.168	0.459
		CAF-VH vs. CAF-GSPE	0.000	0.057	0.598	0.045	0.793
	ZT12	STD-VH vs. CAF-VH	0.000	-0.256	0.149	-0.635	0.036
		CAF-VH vs. CAF-GSPE	0.000	0.09	0.424	0.658	0.001
<i>Per2</i>	ZT0	STD-VH vs. CAF-VH	0.000	0.398	0.055	0.148	0.499
		CAF-VH vs. CAF-GSPE	0.000	0.089	0.615	-0.148	0.301
	ZT12	STD-VH vs. CAF-VH	0.000	0.857	0.027	0.729	0.001
		CAF-VH vs. CAF-GSPE	0.000	-0.856	0.048	-0.458	0.071
<i>Nr1d1</i>	ZT0	STD-VH vs. CAF-VH	0.000	12.013	0.047	0.477	0.033
		CAF-VH vs. CAF-GSPE	0.000	-3.979	0.308	-0.08	0.506
	ZT12	STD-VH vs. CAF-VH	0.000	-1.308	0.881	-0.072	0.763
		CAF-VH vs. CAF-GSPE	0.000	-11.75	0.122	-0.553	0.040
<i>Ror-α</i>	ZT0	STD-VH vs. CAF-VH	0.001	0.203	0.068	1.143	0.022
		CAF-VH vs. CAF-GSPE	0.000	0.044	0.662	-1.353	0.000
	ZT12	STD-VH vs. CAF-VH	0.037	-0.133	0.235	3.074	0.000
		CAF-VH vs. CAF-GSPE	0.024	0.097	0.387	-3.563	0.000
<i>Nampt</i>	ZT0	STD-VH vs. CAF-VH	0.000	1.392	0.181	0.036	0.918
		CAF-VH vs. CAF-GSPE	0.001	-1.422	0.248	-0.566	0.180
	ZT12	STD-VH vs. CAF-VH	0.001	0.671	0.077	1.017	0.033
		CAF-VH vs. CAF-GSPE	0.000	-0.071	0.852	-0.285	0.345

Rats fed with STD or CAF were daily dosage with vehicle or GSPE in the morning (ZT0) or at night (ZT12) and after 9 weeks were sacrificed at 9 a.m. (ZT1), 3 p.m. (ZT7), 9 p.m. (ZT13) or 3 a.m. (ZT19). Acrophase is the time at which the peak of a rhythm occurs ([h], hours); Amplitude is the difference between the peak and the mean value of a wave; MESOR is a circadian rhythm-adjusted mean. The first column (*p*) indicates if there are significant differences between two circadian rhythms. The circadian parameter values are the differences between two groups of each circadian parameter. The statistically significant *p*-values (*p* < 0.05) are highlighted in bold.

Table S3. Measurement of ETC components in the liver.

		Citrate synthase mU/mg protein	Complex I mU/mg protein	Complex II mU/mg protein	Complex II + II mU/mg protein	COX mU/mg protein	
ZT0	ZT1	STD-VH	62.55 ± 6.08	33.95 ± 5.68	118.40 ± 15.08	8.74 ± 1.67	71.69 ± 6.08
		CAF-VH	64.81 ± 6.52	25.54 ± 6.79	80.07 ± 5.57 **	4.55 ± 0.66 **	66.92 ± 10.38
		CAF-GSPE	56.91 ± 3.04	34.86 ± 17.53	74.46 ± 15.99	3.86 ± 1.25	62.51 ± 24.41
	ZT7	STD-VH	60.23 ± 9.33	25.62 ± 1.85	99.40 ± 19.49	6.53 ± 1.86	69.85 ± 18.45
		CAF-VH	60.05 ± 6.28	15.52 ± 2.66 ***	63.28 ± 4.12 **	4.02 ± 0.58 *	66.76 ± 11.18
		CAF-GSPE	59.88 ± 8.09	23.38 ± 3.59 \$	73.66 ± 19.14	4.59 ± 1.34	67.68 ± 15.91
	ZT13	STD-VH	70.28 ± 9.0	33.24 ± 16.81	122.42 ± 25.57	7.22 ± 2.58	58.71 ± 12.70
		CAF-VH	64.31 ± 2.44	20.33 ± 4.51	69.25 ± 17.96 *	3.98 ± 0.94 #	54.83 ± 5.00
		CAF-GSPE	74.67 ± 2.57 \$\$	32.33 ± 4.71 \$	112.02 ± 12.16 \$\$	60.8 ± 1.99 +	56.46 ± 4.48
ZT12	ZT19	STD-VH	69.49 ± 7.01	37.74 ± 3.34	144.27 ± 11.08	8.82 ± 1.64	58.21 ± 11.96
		CAF-VH	72.49 ± 4.64	32.53 ± 4.06 \$	108.75 ± 16.10 **	5.24 ± 0.70 **	51.22 ± 11.64
		CAF-GSPE	70.23 ± 8.78	22.88 ± 3.00 \$\$	86.97 ± 8.35 +	4.61 ± 0.75	57.59 ± 11.44
	ZT1	STD-VH	65.02 ± 7.97	28.71 ± 12.08	100.19 ± 19.64	6.41 ± 1.28	65.95 ± 9.85
		CAF-VH	60.97 ± 4.69	26.26 ± 6.81	78.31 ± 13.99	4.75 ± 1.06 #	57.39 ± 12.80
		CAF-GSPE	63.93 ± 6.21	26.41 ± 5.10	79.91 ± 19.67	5.33 ± 3.11	54.90 ± 4.42
	ZT7	STD-VH	59.72 ± 4.06	41.60 ± 7.40	112.19 ± 17.75	7.25 ± 1.29	56.98 ± 10.80
		CAF-VH	59.32 ± 3.77	23.12 ± 7.33 *	63.43 ± 9.66 **	4.28 ± 0.94 **	54.85 ± 6.49
		CAF-GSPE	57.36 ± 2.32	31.85 ± 12.93	78.61 ± 9.95 +	4.53 ± 1.07	57.65 ± 2.35
ZT13	STD-VH	68.75 ± 8.66	33.91 ± 6.82	126.38 ± 12.90	8.46 ± 2.03	56.22 ± 10.17	
	CAF-VH	64.66 ± 5.09	22.63 ± 4.91 *	84.67 ± 7.61 ***	4.94 ± 0.70 *	47.79 ± 6.68	
	CAF-GSPE	58.93 ± 3.03	23.86 ± 6.35	72.84 ± 11.18	4.02 ± 0.86	43.98 ± 5.64	
ZT19	STD-VH	69.00 ± 5.11	42.16 ± 17.59	132.48 ± 26.19	8.59 ± 4.10	56.59 ± 11.18	
	CAF-VH	63.16 ± 6.68	22.95 ± 12.47	69.47 ± 40.41 *	3.49 ± 2.50 +	55.52 ± 19.91	
	CAF-GSPE	61.66 ± 8.12	23.06 ± 8.14	84.00 ± 18.94	4.45 ± 2.16	45.36 ± 11.36	

Rats fed with STD or CAF were daily dosage with vehicle or GSPE in the morning (ZT0) or at night (ZT12) and after 9 weeks were sacrificed at 9 a.m. (ZT1), 3 p.m. (ZT7), 9 p.m. (ZT13) or 3 a.m. (ZT19). The values are the mean ± standard error of the mean (SEM). ($n = 4$). * The effect of diet within vehicle groups (Student's t test, $p < 0.05$); \$ The effect of GSPE consumption within CAF groups (Student's t test, $p < 0.05$); + Indicates tendency between CAF-VH and CAF-GSPE using Student's t test ($p = 0.1-0.051$). COX Cytochrome c oxidase.

Table S4.1 Metabolites of the TCA cycle in the liver.

ZT	Metabolite	ZT0-STD-VH vs. ZT0-CAF-VH				ZT0-CAF-VH vs. ZT0-CAF-GSPE				ZT0-STD-VH vs. ZT0-CAF-GSPE			
		ZT0-STD-VH	ZT0-CAF-VH	<i>p</i> -value	FC	ZT0-CAF-VH	ZT0-CAF-GSPE	<i>p</i> -value	FC	ZT0-STD-VH	ZT0-CAF-GSPE	<i>p</i> -value	FC
ZT1	Pyruvic acid	0.46 ± 0.03	0.32 ± 0.06	0.068	0.7	0.32 ± 0.06	0.34 ± 0.02	0.816	1.1	0.46 ± 0.03	0.34 ± 0.02	0.024	0.7
	Succinic acid	0.75 ± 0.08	1.1 ± 0.2	0.155	1.5	1.1 ± 0.2	1.06 ± 0.25	0.886	1	0.75 ± 0.08	1.06 ± 0.25	0.242	1.4
	Fumaric acid	6.37 ± 0.69	6.54 ± 1.13	0.905	1	6.54 ± 1.13	9.41 ± 0.87	0.118	1.4	6.37 ± 0.69	9.41 ± 0.87	0.039	1.5
	Malic acid	2.61 ± 0.37	2.86 ± 0.54	0.709	1.1	2.86 ± 0.54	3.79 ± 0.11	0.212	1.3	2.61 ± 0.37	3.79 ± 0.11	0.047	1.5
	α-ketoglutaric acid	0.04 ± 0.01	0.02 ± 0	0.150	0.5	0.02 ± 0	0.05 ± 0.01	0.013	2.5	0.04 ± 0.01	0.05 ± 0.01	0.245	1.3
	Citric acid	0.37 ± 0.08	0.26 ± 0.07	0.332	0.7	0.26 ± 0.07	0.43 ± 0.06	0.128	1.7	0.37 ± 0.08	0.43 ± 0.06	0.600	1.2
ZT7	Pyruvic acid	0.56 ± 0.06	0.32 ± 0.01	0.005	0.6	0.32 ± 0.01	0.36 ± 0.03	0.349	1.1	0.56 ± 0.06	0.36 ± 0.03	0.019	0.6
	Succinic acid	1.27 ± 0.15	0.73 ± 0.14	0.038	0.6	0.73 ± 0.14	1.18 ± 0.12	0.047	1.6	1.27 ± 0.15	1.18 ± 0.12	0.658	0.9
	Fumaric acid	9.17 ± 1.48	7.15 ± 1.37	0.356	0.8	7.15 ± 1.37	8.98 ± 0.99	0.322	1.3	9.17 ± 1.48	8.98 ± 0.99	0.918	1
	Malic acid	3 ± 0.51	3.56 ± 0.84	0.593	1.2	3.56 ± 0.84	3.98 ± 0.56	0.688	1.1	3 ± 0.51	3.98 ± 0.56	0.242	1.3
	α-ketoglutaric acid	0.04 ± 0.01	0.05 ± 0.01	0.307	1.3	0.05 ± 0.01	0.05 ± 0.01	0.944	1	0.04 ± 0.01	0.05 ± 0.01	0.263	1.3
	Citric acid	0.42 ± 0.16	0.52 ± 0.04	0.586	1.2	0.52 ± 0.04	0.6 ± 0.12	0.508	1.2	0.42 ± 0.16	0.6 ± 0.12	0.392	1.4
ZT13	Pyruvic acid	0.86 ± 0.1	0.54 ± 0.07	0.040	0.6	0.54 ± 0.07	0.47 ± 0.03	0.376	0.9	0.86 ± 0.1	0.47 ± 0.03	0.010	0.5
	Succinic acid	0.73 ± 0.08	1.16 ± 0.19	0.083	1.6	1.16 ± 0.19	0.88 ± 0.16	0.311	0.8	0.73 ± 0.08	0.88 ± 0.16	0.436	1.2
	Fumaric acid	8.4 ± 0.73	6.38 ± 0.61	0.079	0.8	6.38 ± 0.61	8.4 ± 0.86	0.104	1.3	8.4 ± 0.73	8.4 ± 0.86	0.999	1
	Malic acid	2.91 ± 0.27	2.81 ± 0.25	0.793	1	2.81 ± 0.25	3.11 ± 0.48	0.597	1.1	2.91 ± 0.27	3.11 ± 0.48	0.726	1.1
	α-ketoglutaric acid	0.03 ± 0.01	0.03 ± 0	0.674	1	0.03 ± 0	0.03 ± 0	0.495	1	0.03 ± 0.01	0.03 ± 0	0.883	1
	Citric acid	0.3 ± 0.05	0.22 ± 0.02	0.209	0.7	0.22 ± 0.02	0.29 ± 0.06	0.334	1.3	0.3 ± 0.05	0.29 ± 0.06	0.893	1
ZT19	Pyruvic acid	0.62 ± 0.11	0.55 ± 0.03	0.568	0.9	0.55 ± 0.03	0.39 ± 0.06	0.053	0.7	0.62 ± 0.11	0.39 ± 0.06	0.112	0.6
	Succinic acid	1.02 ± 0.21	1.23 ± 0.16	0.464	1.2	1.23 ± 0.16	1.08 ± 0.2	0.589	0.9	1.02 ± 0.21	1.08 ± 0.2	0.843	1.1
	Fumaric acid	4.74 ± 0.52	5.56 ± 0.63	0.352	1.2	5.56 ± 0.63	8.79 ± 1.26	0.061	1.6	4.74 ± 0.52	8.79 ± 1.26	0.025	1.9
	Malic acid	1.63 ± 0.18	2.43 ± 0.3	0.061	1.5	2.43 ± 0.3	3.02 ± 0.63	0.427	1.2	1.63 ± 0.18	3.02 ± 0.63	0.076	1.9
	α-ketoglutaric acid	0.02 ± 0	0.03 ± 0	0.083	1.5	0.03 ± 0	0.04 ± 0.01	0.046	1.3	0.02 ± 0	0.04 ± 0.01	0.008	2
	Citric acid	0.09 ± 0.02	0.2 ± 0.04	0.042	2.2	0.2 ± 0.04	0.23 ± 0.04	0.660	1.2	0.09 ± 0.02	0.23 ± 0.04	0.022	2.6

Metabolites of the tricarboxylic acid (TCA) cycle in the liver of rats fed with STD or CAF diet were daily dosage with vehicle or GSPE in the morning (ZT0) and after 9 weeks were sacrificed at 9 a.m. (ZT1), 3 p.m. (ZT7), 9 p.m. (ZT13) or 3 a.m. (ZT19). The statistically significant *p*-values (*p* < 0.05) are highlighted in bold.

Table S4.2 Metabolites of the TCA cycle in the liver.

ZT	Metabolite	ZT12-STD-VH vs. ZT12-CAF-VH				ZT12-CAF-VH vs. ZT12-CAF-GSPE				ZT12-STD-VH vs. ZT12-CAF-GSPE			
		ZT12-STD-VH	ZT12-CAF-VH	p-value FC		ZT12-CAF-VH	ZT12-CAF-GSPE	p-value FC		ZT12-STD-VH	ZT12-CAF-GSPE	p-value FC	
ZT1	Pyruvic acid	0.46 ± 0.04	0.37 ± 0.04	0.128	0.8	0.37 ± 0.04	0.39 ± 0.06	0.808	1.1	0.46 ± 0.04	0.39 ± 0.06	0.343	0.8
	Succinic acid	0.9 ± 0.24	1.13 ± 0.17	0.470	1.3	1.13 ± 0.17	0.98 ± 0.35	0.724	0.9	0.9 ± 0.24	0.98 ± 0.35	0.846	1.1
	Fumaric acid	13.34 ± 2.3	9.71 ± 0.81	0.186	0.7	9.71 ± 0.81	11.19 ± 1.74	0.468	1.2	13.34 ± 2.3	11.19 ± 1.74	0.484	0.8
	Malic acid	4.55 ± 0.66	3.76 ± 0.23	0.301	0.8	3.76 ± 0.23	3.99 ± 0.5	0.696	1.1	4.55 ± 0.66	3.99 ± 0.5	0.525	0.9
	α-ketoglutaric acid	0.04 ± 0.01	0.03 ± 0.01	0.482	0.8	0.03 ± 0.01	0.04 ± 0.01	0.804	1.3	0.04 ± 0.01	0.04 ± 0.01	0.650	1
	Citric acid	0.31 ± 0.06	0.32 ± 0.11	0.933	1	0.32 ± 0.11	0.41 ± 0.15	0.637	1.3	0.31 ± 0.06	0.41 ± 0.15	0.548	1.3
ZT7	Pyruvic acid	0.62 ± 0.07	0.42 ± 0.05	0.045	0.7	0.42 ± 0.05	0.36 ± 0.03	0.344	0.9	0.62 ± 0.07	0.36 ± 0.03	0.012	0.6
	Succinic acid	1.05 ± 0.14	1.02 ± 0.14	0.874	1	1.02 ± 0.14	1.13 ± 0.17	0.652	1.1	1.05 ± 0.14	1.13 ± 0.17	0.754	1.1
	Fumaric acid	12.51 ± 1.53	8.5 ± 1.14	0.081	0.7	8.5 ± 1.14	7.94 ± 1.71	0.796	0.9	12.51 ± 1.53	7.94 ± 1.71	0.094	0.6
	Malic acid	3.9 ± 0.55	3.81 ± 0.39	0.892	1	3.81 ± 0.39	3.01 ± 0.63	0.325	0.8	3.9 ± 0.55	3.01 ± 0.63	0.329	0.8
	α-ketoglutaric acid	0.03 ± 0	0.03 ± 0.01	0.568	1	0.03 ± 0.01	0.04 ± 0	0.355	1.3	0.03 ± 0	0.04 ± 0	0.667	1.3
	Citric acid	0.37 ± 0.1	0.3 ± 0.05	0.580	0.8	0.3 ± 0.05	0.22 ± 0.06	0.365	0.7	0.37 ± 0.1	0.22 ± 0.06	0.273	0.6
ZT13	Pyruvic acid	0.5 ± 0.03	0.41 ± 0.05	0.188	0.8	0.41 ± 0.05	0.35 ± 0.03	0.341	0.9	0.5 ± 0.03	0.35 ± 0.03	0.008	0.7
	Succinic acid	1.13 ± 0.09	1.04 ± 0.08	0.487	0.9	1.04 ± 0.08	1.45 ± 0.05	0.005	1.4	1.13 ± 0.09	1.45 ± 0.05	0.021	1.3
	Fumaric acid	5.55 ± 0.64	6.11 ± 0.67	0.570	1.1	6.11 ± 0.67	7.69 ± 0.98	0.233	1.3	5.55 ± 0.64	7.69 ± 0.98	0.118	1.4
	Malic acid	1.57 ± 0.22	2.51 ± 0.21	0.023	1.6	2.51 ± 0.21	2.48 ± 0.31	0.946	1	1.57 ± 0.22	2.48 ± 0.31	0.053	1.6
	α-ketoglutaric acid	0.03 ± 0	0.02 ± 0	0.315	0.7	0.02 ± 0	0.03 ± 0.01	0.356	1.5	0.03 ± 0	0.03 ± 0.01	0.942	1
	Citric acid	0.18 ± 0.03	0.24 ± 0.04	0.240	1.3	0.24 ± 0.04	0.21 ± 0.05	0.690	0.9	0.18 ± 0.03	0.21 ± 0.05	0.614	1.2
ZT19	Pyruvic acid	0.54 ± 0.03	0.31 ± 0.03	0.001	0.6	0.31 ± 0.03	0.42 ± 0.07	0.205	1.4	0.54 ± 0.03	0.42 ± 0.07	0.151	0.8
	Succinic acid	0.68 ± 0.09	1.29 ± 0.25	0.063	1.9	1.29 ± 0.25	1.24 ± 0.16	0.879	1	0.68 ± 0.09	1.24 ± 0.16	0.022	1.8
	Fumaric acid	8.46 ± 1.43	6.79 ± 1.09	0.388	0.8	6.79 ± 1.09	8.95 ± 0.68	0.143	1.3	8.46 ± 1.43	8.95 ± 0.68	0.769	1.1
	Malic acid	2.8 ± 0.44	2.44 ± 0.45	0.583	0.9	2.44 ± 0.45	3.21 ± 0.25	0.181	1.3	2.8 ± 0.44	3.21 ± 0.25	0.447	1.1
	α-ketoglutaric acid	0.03 ± 0.01	0.03 ± 0.01	0.888	1	0.03 ± 0.01	0.04 ± 0.01	0.406	1.3	0.03 ± 0.01	0.04 ± 0.01	0.370	1.3
	Citric acid	0.21 ± 0.06	0.22 ± 0.08	0.915	1	0.22 ± 0.08	0.38 ± 0.11	0.295	1.7	0.21 ± 0.06	0.38 ± 0.11	0.237	1.8

Metabolites of the TCA cycle in the liver of rats fed with STD or CAF diet were daily dosage with vehicle or GSPE at night (ZT12) and after 9 weeks were sacrificed at 9 a.m. (ZT1), 3 p.m. (ZT7), 9 p.m. (ZT13) or 3 a.m. (ZT19). The statistically significant p-values ($p < 0.05$) are highlighted in bold.