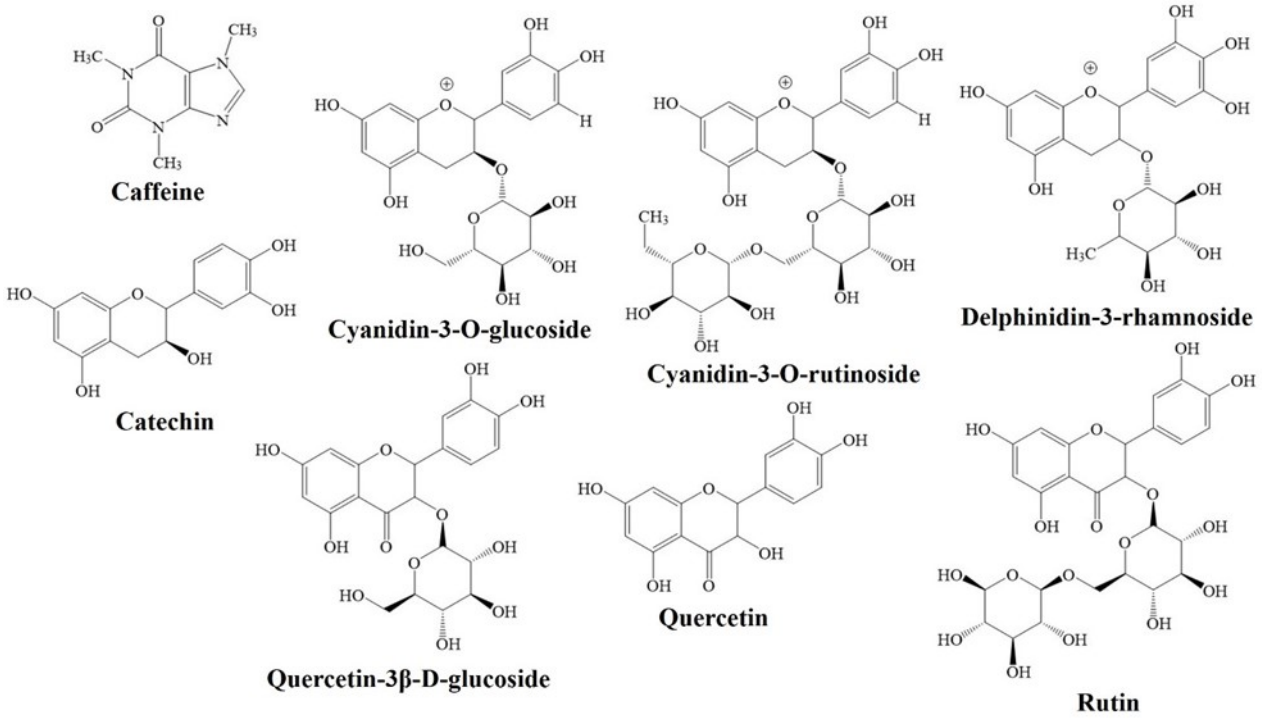
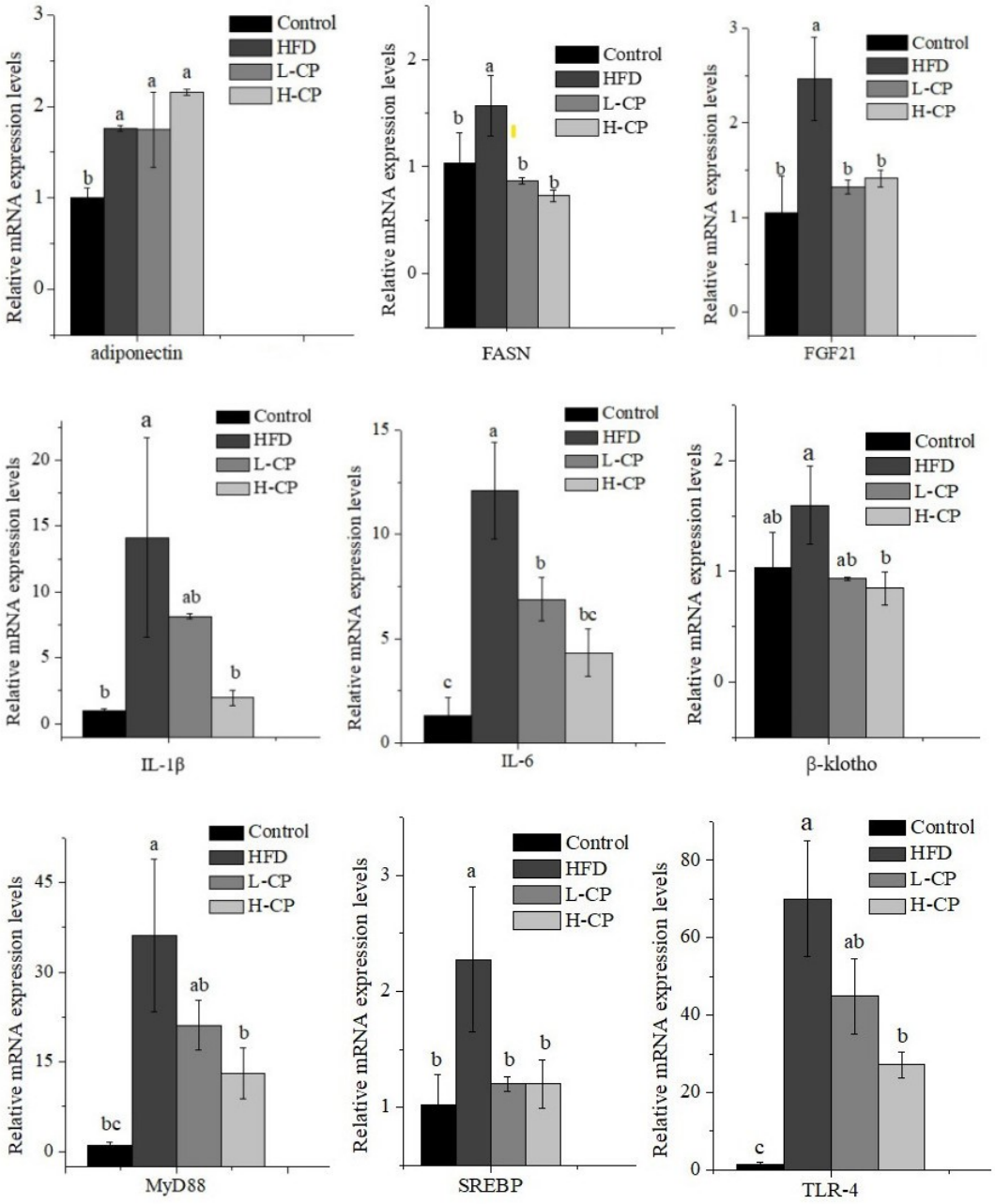
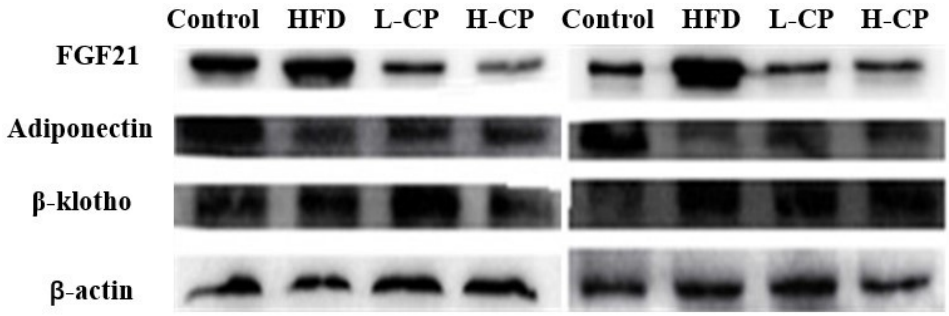


Supplementary Figure 1. Structures of flavonoids and caffeine were detected from CP extracts.



Supplementary Figure 2. Relative mRNA expression levels in liver.

Abbreviations: *FASN, fatty acid synthase; FGF21, fibroblast growth factor 21; IL-1β, Interleukin-1β; IL-6, Interleukin-6; MyD88, myeloid differential protein-88; SREBP, sterol responsive element binding protein; TLR-4, toll-like receptor-4.* Different letters indicated significant difference between groups (n = 3 animals/group).



Supplementary Figure 3. Western blot analysis of male C57BL/6J mice.
Abbreviation: FGF21, fibroblast growth factor.

Supplementary Table 1. Mass spectrometry data of CP extracts

Compound	Formula	Retention time (min)	Theoretical precursor ion (m/z)
Caffeine	$C_8H_{10}N_4O_2$	0.964	195.0889
Delphinidin-3-rhamnoside	$C_{21}H_{22}O_{11}$	5.579	450.1165
Catechin	$C_{15}H_{14}O_6$	5.809	290.0791
Rutin	$C_{27}H_{30}O_{16}$	7.077	610.1537
Quercetin-3β-D-glucoside	$C_{21}H_{20}O_{12}$	7.306	464.0961
Cyanidin-3-O-rutinoside	$C_{27}H_{30}O_{15}$	7.405	595.1651
Cyanidin-3-O-glucoside	$C_{21}H_{20}O_{11}$	7.892	449.1078
Quercetin	$C_{15}H_{10}O_7$	9.653	302.0431

Supplementary Table 2. Primers used in RT-PCR analysis.

Gene name		Sequence		Sequence
β-actin	Forward	CTACCTCATGAAGATCCTGACC	Reverse	CACAGCTTCTCTTTGATGTCAC
adiponectin	Forward	GCCGTTCTCTTCACCTACGAC	Reverse	CCATCCCCATACACCTGGA
FASN	Forward	TAAAGCATGACCTCGTGATGAA	Reverse	GAAGTTCAGTGAGGCGTAGTAG
FGF21	Forward	CGGTTACAATGTGTACCAGTCT	Reverse	GTAAAGGCTCTACCATGCTCAG
IL-1β	Forward	TCGCAGCAGCACATCAACAAGAG	Reverse	AGGTCCACGGGAAAGACACAGG
IL-6	Forward	CTCCCAACAGACCTGTCTATAC	Reverse	CCATTGCACAACTCTTTTCTCA
MyD88	Forward	CGGAACTTTTCGATGCCTTTAT	Reverse	CACACACAACTTAAGCCGATAG
SREBP-1c	Forward	TAAAGCATGACCTCGTGATGAA	Reverse	GAAGTTCAGTGAGGCGTAGTAG
TLR-4	Forward	GAAGTTCAGTGAGGCGTAGTAG	Reverse	CCTCAGCAGGGACTTCTCAA
β-klotho	Forward	GAAATCCGCGTGTTTGGTTATA	Reverse	GAAGCCGTTGTCTTGTATGATC

Abbreviations: *FASN, fatty acid synthase; FGF21, fibroblast growth factor 21; IL-1β, interleukin-1β; IL-6, interleukin-6; MyD88, myeloid differential protein-88; SREBP-1c, sterol responsive element binding protein-1c; TLR-4, toll-like receptor-4*.

Supplementary Table 3. Relative protein expression levels in liver and adipose tissues.

protein	Control	HFD	L-CP	H-CP	P-value
FGF21	1.19±0.39^{ab}	1.97±0.40^{a}	1.16±0.66^{ab}	0.71±0.20^{b}	0.045
Adiponectin	1.07±0.16	0.63±0.27	0.68±0.23	0.75±0.24	0.167
β-klotho	0.98±0.42	1.20±0.38	1.06±0.38	0.90±0.35	0.802
UCP1	1.02±0.42	0.55±0.06	1.08±0.07	0.95±0.17	0.055
PGC-1α	1.48±0.28	1.30±0.22	1.61±0.25	1.43±0.52	0.634

Abbreviation: FGF21, fibroblast growth factor 21; PGC-1α, peroxisome proliferator-activated receptor-gamma coactivator 1 alpha; UCP1, uncoupling protein 1. Values were presented as mean ± SD (n = 10 animals/group). Different letters indicated significant difference between groups.