Table S1 The proximate nutritional composition of MBC (g/100 g dry weight basis)

Component	Available Carbohydrate	Protein	Ash	Fat	Dietary fiber		TPC[a]	TFC[b]
					Insoluble	Soluble		
MBC	9.97 ± 0.12	8.55 ± 0.16	2.24 ± 0.10	0.64 ± 0.07	76.20 ± 1.28	2.40 ± 0.22	26.68 ± 0.12	18.23 ± 0.08

Data are expressed as mean ± standard deviation (n = 3). TPC, Total phenolic content; TFC, Total flavonoid content.

[a] mg gallic acid equivalents (GAE)/100 g

[b] mg (+)-catechin equivalents (CAE)/100 g

Table S2 Composition of experimental diets[1]

Ingredient (g/kg)	NCD	NCD-MBC	HFD	HFD-MBC
Mung bean coat	0.00	60.00	0.00	60.00
Casein, 80 Mesh	189.56	184.43	258.45	253.32
L-Cystine	2.84	2.84	3.88	3.88
Corn Starch	479.79	479.79	0.00	0.00
Maltodextrin 10	118.48	111.15	161.53	154.2
Sucrose	65.21	65.21	88.91	88.91
Cellulose, BW200	47.39	0.23	64.61	17.45
Soybean Oil	23.70	23.32	32.31	31.93
Lard	18.96	18.96	316.60	316.60
Mineral Mix	9.48	9.48	12.92	12.92
DiCalcium Phosphate	12.32	12.32	16.80	16.80
Calcium Carbonate	5.21	5.21	7.11	7.11
Potassium Citrate, 1 H2O	15.64	15.64	21.32	21.32
Vitamin Mix, V10001	9.48	9.48	12.92	12.92
Choline Bitartrate	1.90	1.90	2.58	2.58
FD&C Yellow Dye #5	0.04	0.04	0.00	0.00
FD&C Blue Dye #1	0.01	0.01	0.07	0.07
Total	1000	1000	1000	1000
% Energy and their source				
Protein	20	20	20	20
Carbohydrate	70	70	20	20
Fat	10	10	60	60
Total	100	100	100	100

[1]NCD, Normal control diet; NCD-MBC, Normal control diet supplemented with mung bean seed coat (MBC); HFD, High-fat diet; HFD-MBC, High-fat diet supplemented with MBC.

Table S3 Statistics of hepatic RNA-sequencing reads in different groups

Sample name	Raw Reads	Clean Reads	Mapped Reads (Ratio*)	Unique Mapped Reads (Ratio)	Multiple Map Reads (Ratio)
NCD-1	52,615,536	52,210,896	49,992,325 (95.75%)	46,092,942 (88.28%)	3,899,383 (7.47%)
NCD-2	46,363,592	46,040,032	43,847,427 (95.24%)	39,815,699 (86.48%)	4,031,728 (8.76%)
NCD-3	53,565,308	53,189,106	51,135,574 (96.14%)	46,988,289 (88.34%)	4,147,285 (7.8%)
HFD-1	50,955,026	50,536,810	48,311,501 (95.6%)	44,315,408 (87.69%)	3,996,093 (7.91%)
HFD-2	51,671,774	51,261,488	49,536,466 (96.63%)	46,061,745 (89.86%)	3,474,721 (6.78%)
HFD-3	50,363,242	49,963,448	47,141,247 (94.35%)	42,846,633 (85.76%)	4,294,614 (8.6%)
HFD-MBC-1	46,160,772	45,536,938	42,483,445 (93.29%)	36,810,186 (80.84%)	5,673,259 (12.46%)
HFD-MBC-2	52,734,392	52,323,472	49,470,892 (94.55%)	45,164,537 (86.32%)	4,306,355 (8.23%)
HFD-MBC-3	45,891,944	45,347,464	42,090,777 (92.82%)	37,302,546 (82.26%)	4,788,231 (10.56%)

Note: NCD, normal control diet; HFD, high-fat diet, HFD-MBC, High-fat diet supplemented with mung bean seed coat.

n=3 per group, * Ratio=Mapped Reads/Clean Reads

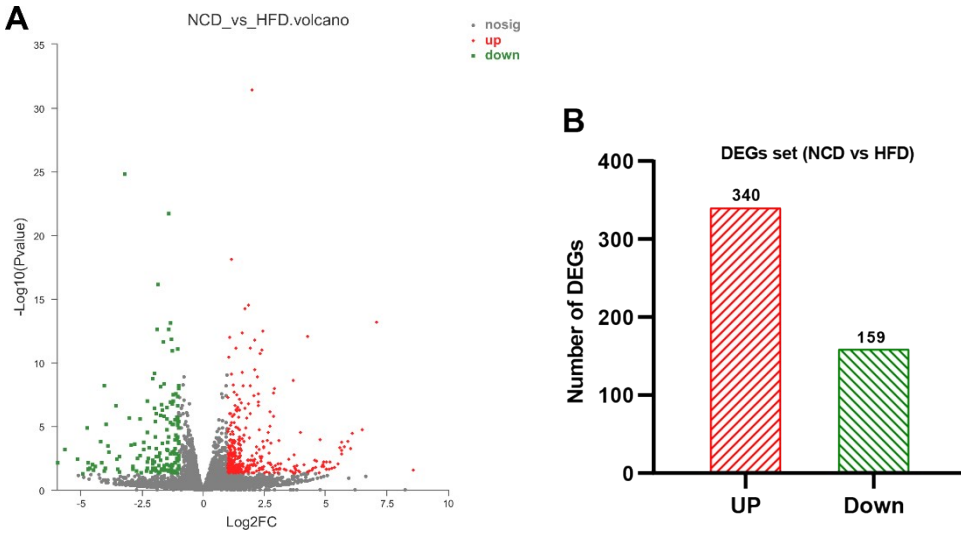

Figure S1 DEGs in livers between the NCD and HFD groups. (A) Volcano plot with DEGs (HFD-MBC *vs* HFD); (B) The upregulated and downregulated DEGs.