Table S1 Proximate nutritional composition of whole mung bean (WMB) and decorticated mung bean (DMB)

	Carbohydrate	Protein	Fat	Ash	Fiber	Sucrose	TPC (GAE/g)
WMB	64.78 ± 0.36 a	25.81 ± 0.12 b	2.58 ± 0.02 a	3.36 ± 0.04 a	3.48 ± 0.01 a	0.89 ± 0.02 b	2.96 ± 0.02 a
DMB	66.28 ± 0.28 a	27.32 ± 0.08 a	2.56 ± 0.01 a	2.99 ± 0.05 b	0.85 ±0.03 b	1.17 ± 0.05 a	0.38 ± 0.04 b

Data are expressed as mean ± standard deviation (n = 3). Means with different small letter superscripts in the same column are significantly different at $P < 0.05$. The letter "a" denotes the highest value. TPC, Total Phenolics content; GAE, Gallic acid equivalents. Determination of TPC followed a previous study by Xu et al [1].

Table S2 Composition of experimental diets[1], and energy and their source of different groups

Ingredient (g/kg)	NC (Normal chow diet)	DC (High-fat diet)	Mung bean-based diet	
			WMB	DMB
Mung bean	0.00	0.00	300.00	300
Casein, 80 Mesh	189.56	258.45	181.02	176.49
L-Cystine	2.84	3.88	3.88	3.88
Corn Starch	479.79	0.00	0.00	0.00
Maltodextrin 10	118.48	161.53	0.00	0.00
Sucrose	65.21	88.91	46.05	41.54
Cellulose, BW200	47.39	64.61	54.17	60.06
Soybean Oil	23.70	32.31	24.57	28.01
Lard	18.96	316.60	316.60	316.60
Mineral Mix	9.48	12.92	12.92	12.92
DiCalcium Phosphate	12.32	16.80	16.80	16.80
Calcium Carbonate	5.21	7.11	7.11	7.11
Potassium Citrate, 1 H_2O	15.64	21.32	21.32	21.32
Vitamin Mix, V10001	9.48	12.92	12.92	12.92
Choline Bitartrate	1.90	2.58	2.58	2.58
FD&C Yellow Dye #5	0.04	0.00	0.00	0.00
FD&C Blue Dye #1	0.01	0.07	0.07	0.07
Total (g)	1000	1000	1000	1000
% Energy and their source (physiological fuel value)				
Protein	20	20	20	20
Carbohydrate	70	20	20	20
Fat	10	60	60	60
Total	100	100	100	100

WMB, High-fat diet supplemented with whole mung bean; DMB, High-fat diet supplemented with decorticated mung bean.

[1] To equalize the carbohydrate, protein, fat, sucrose and fiber content (g/kg diet) of the high-fat diet and mung bean-based diet, the maltodextrin, casein, soybean oil, sucrose, and cellulose were reduced in the WMB and DMB diets, respectively.

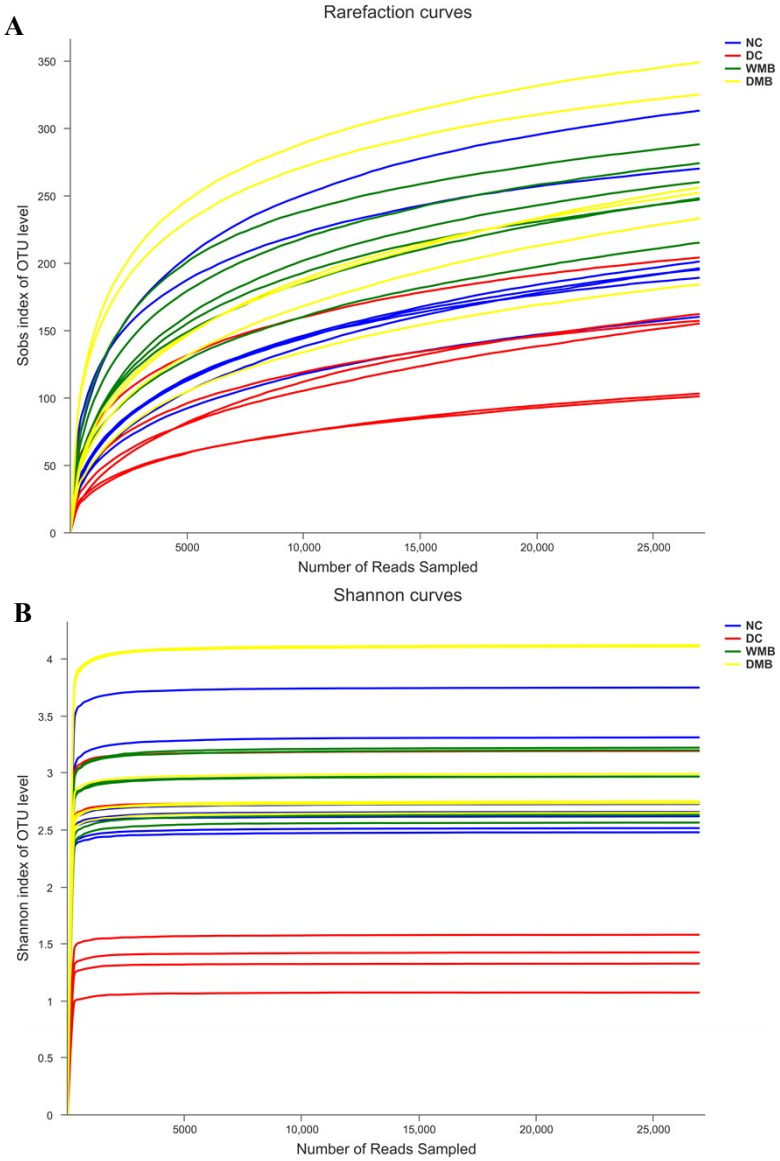

Fig. S1 Alpha diversity analysis of samples by Rarefaction analysis (A) and Shannon index (B). Each bar represents one sample (n = 6).

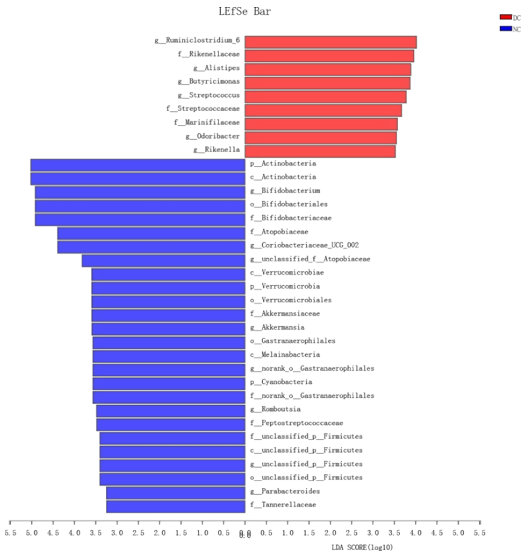

Fig. S2 Linear discriminant analysis (LDA) scores derived from LEfSe analysis (NC vs DC groups, LDA score of > 3. The higher the score is, the more important the role is).

References

1. B. J. Xu and S. K. C. Chang, A Comparative Study on Phenolic Profiles and Antioxidant Activities of Legumes as Affected by Extraction Solvents, J. Food Sci., 2007, **72**, S159-S166.