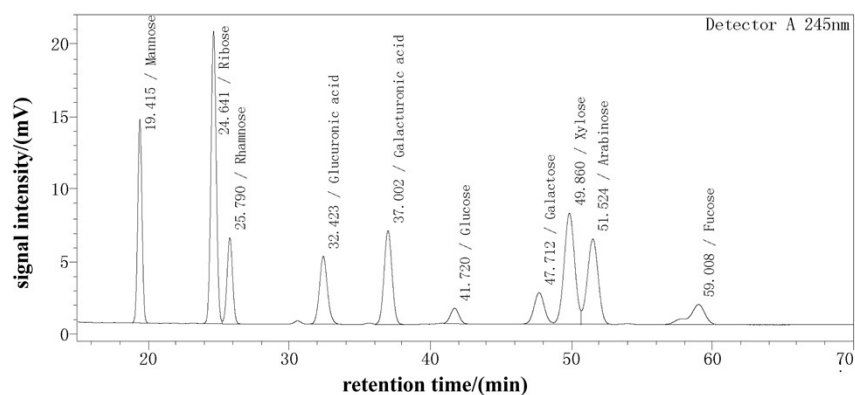
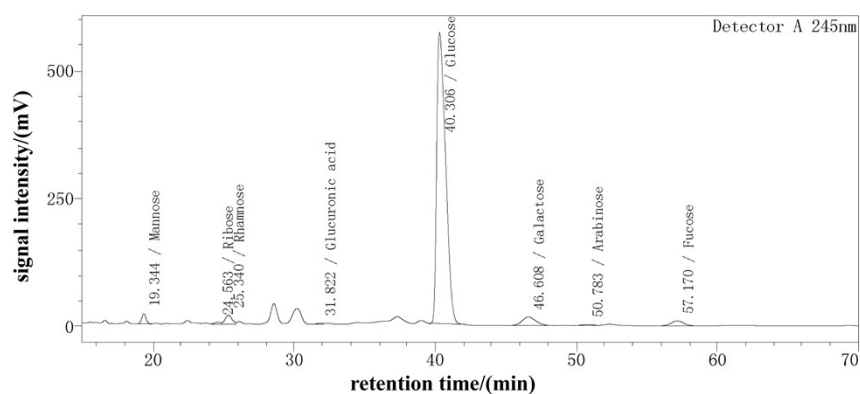


1 Supplementary Figures

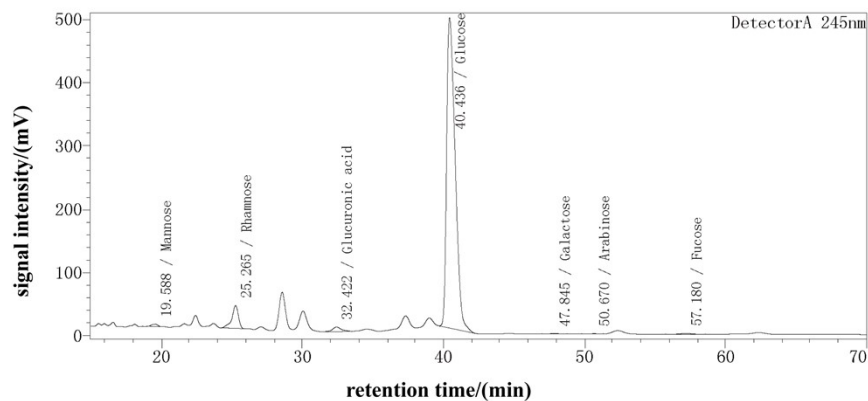
A



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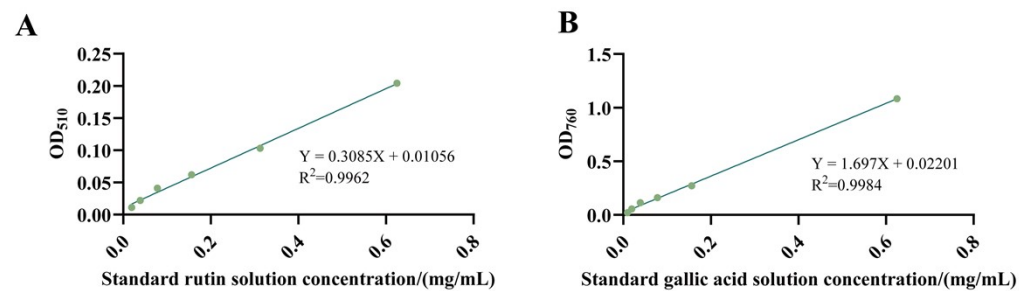
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3 **Supplementary Fig. S1.** Chromatogram of monosaccharide composition analysis. (A) Chromatogram

4 of monosaccharide standards; (B) Chromatogram of monosaccharide composition in mulberry leaf

5 extract; (C) Chromatogram of monosaccharides in resistant dextrin.

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8 **Supplementary Fig. S2.** Standard curve for the determination of mulberry leaf extract constituents. (A)

9 Rutin solution standard curve; (B) Gallic acid solution standard curve. (n=3).

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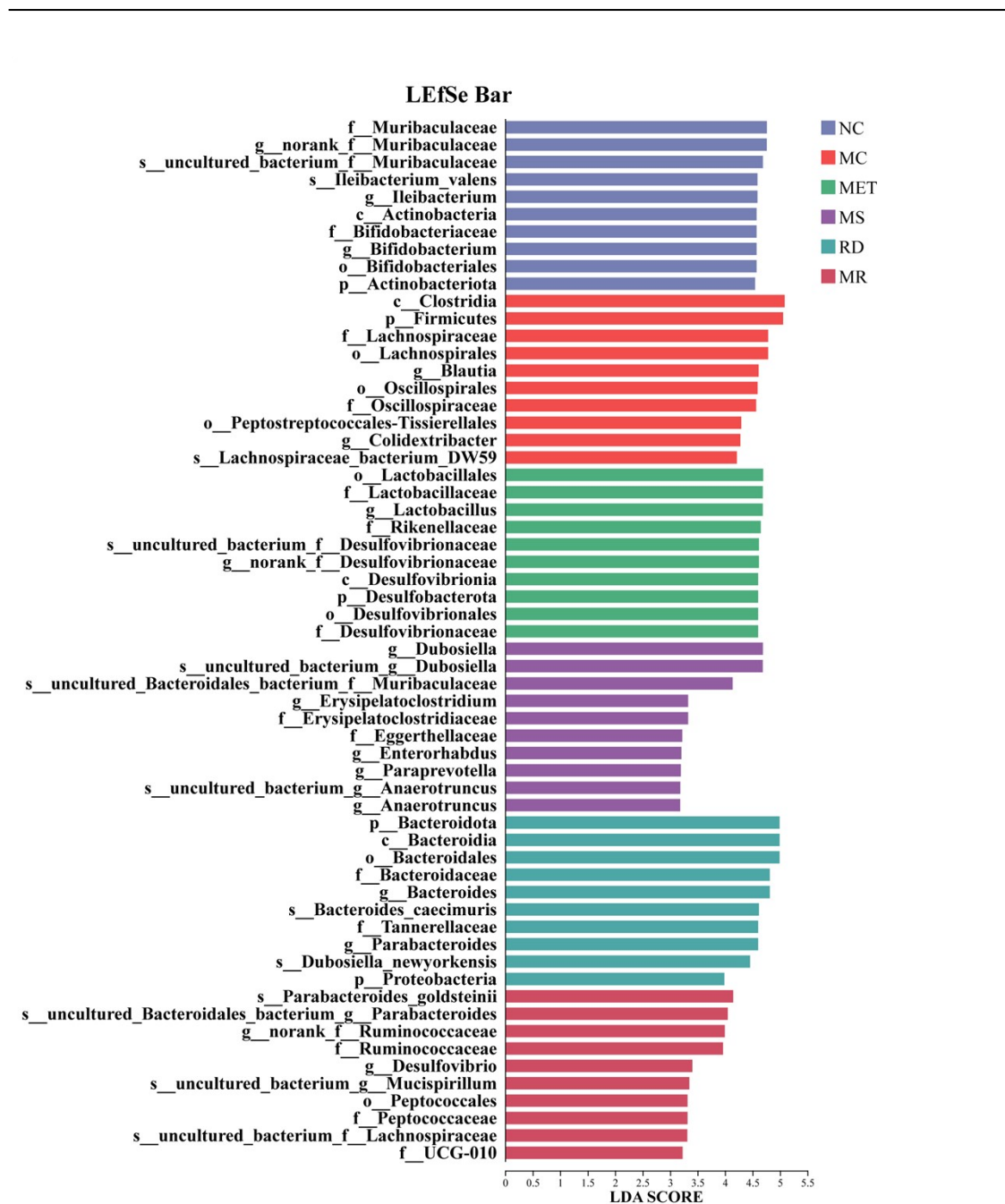
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21 **Supplementary Fig. S3.** LEfSe analysis among different groups. NC: normal control; MC: model

22 control; MET: positive control (metformin); MS: mulberry leaf extract; RD: resistant dextrin; MR:

23 resistant dextrin and mulberry leaf extract. (n=6).

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26 Supplementary Tables

27 Supplementary Table S1. Monosaccharide composition of resistant dextrin.

Monosaccharide	Content/(mg/kg)
Mannose	367.19
Rhamnose	9385.73
Glucuronic acid	2137.47
Glucose	340936.68
Galactose	99.53
Arabinose	8.57
Fucose	1102.51

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40 **Supplementary Table S2.** Constituent content of mulberry leaf extract based on dry weight (n=3).

Constituent	Content/(mg/g)
Flavonoids	24.52±4.69
Polyphenols	153.15±2.13

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59 **Supplementary Table S3.** Compositional content of small molecules in mulberry leaf extract (n=3).

Category	Constituent	Content/(mg/kg)
Alkaloids	DNJ	14065.89±465.37
	γ-aminobutyric acid	2774.44±50.85
	Mulberroside A	54.35±0.46
Polyphenols	Chlorogenic acid	1460.80±13.71
	Cryptochlorogenic acid	1361.99±17.77
	Neochlorogenic acid	2089.51±58.94
Flavonoids	Astragalin	22.53±0.80
	Isoquercetin	17.84±0.41
	Rutin	28.88±0.20

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77 **Supplementary Table S4.** Monosaccharide composition of mulberry leaf extract.

Constituent	Content/(mg/kg)
Mannose	1233.49
Rhamnose	3123.88
Glucuronic acid	229.06
Glucose	272500.92
Galactose	4664.09
Arabinose	263.10
Ribose	118.71
Fucose	4290.88
