

Supplementary Materials

“Yang and Wu: Synthetic conditions, physical properties and antibacterial activities of silver nanoparticles with exopolysaccharides of a medicinal fungus”

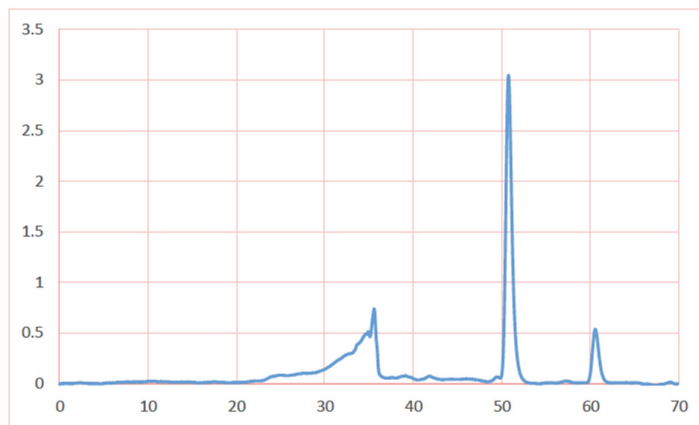


Figure S1. HPGPC spectrum for the molecular weight distribution of EPS-1.

Table S1. Molecular weight distribution of EPS-1.

Retention time (min)	Molecular weight (Da)	% Area
35.622	649883	28.72
50.831	222	60.37
60.663	60.663	10.92

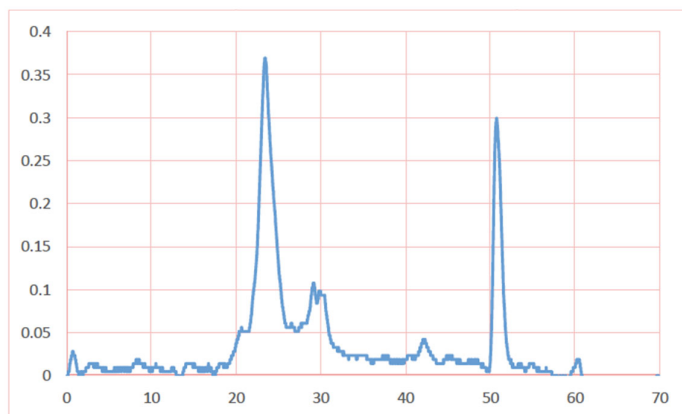


Figure S2. HPGPC spectrum for the molecular weight distribution of EPS-2

Table S2. Molecular weight distribution of EPS-2

Retention time (min)	Molecular weight (Da)	% Area
23.450	386036950	56.92
29.283	18083149	8.33
50.817	224	29.36
60.633	60.633	2.59

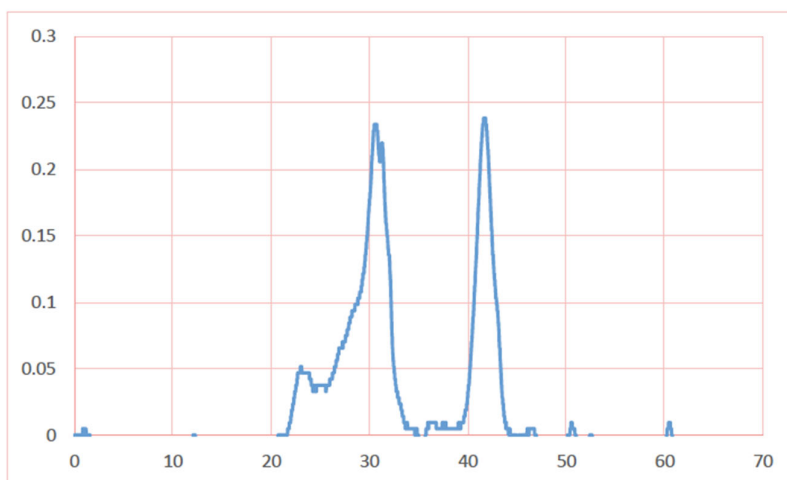


Figure S3. HPGPC spectrum for the molecular weight distribution of EPS-3

Table S3. Molecular weight distribution of EPS-3

Retention time (min)	Molecular weight (Da)	% Area
30.567	9221806	65.14
41.9	24103	34.86

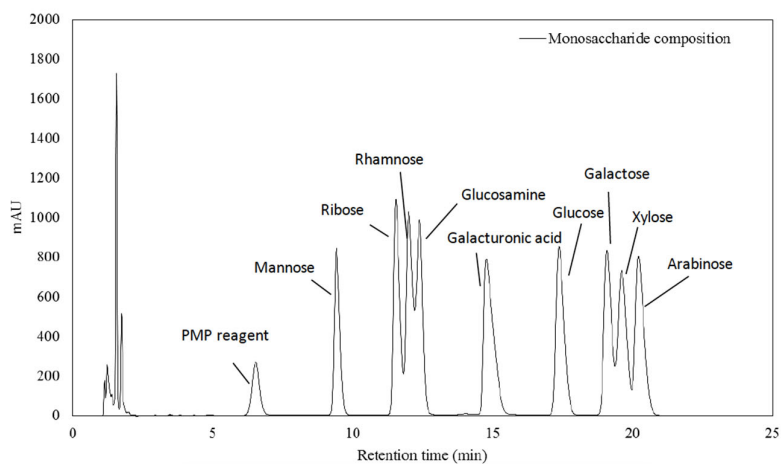


Figure S4. HPLC of monosaccharide standards.

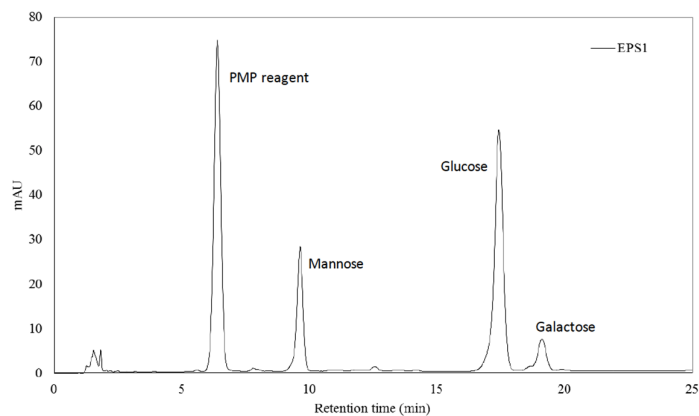


Figure S5. HPLC analysis of monosaccharide composition of EPS-1.

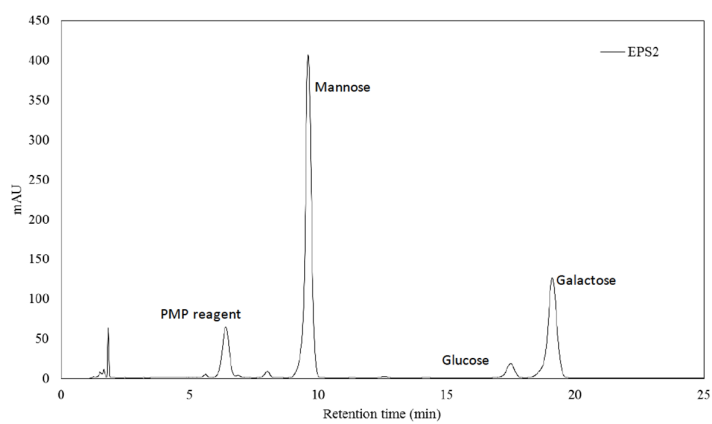


Figure S6. HPLC analysis of monosaccharide composition of EPS-2.

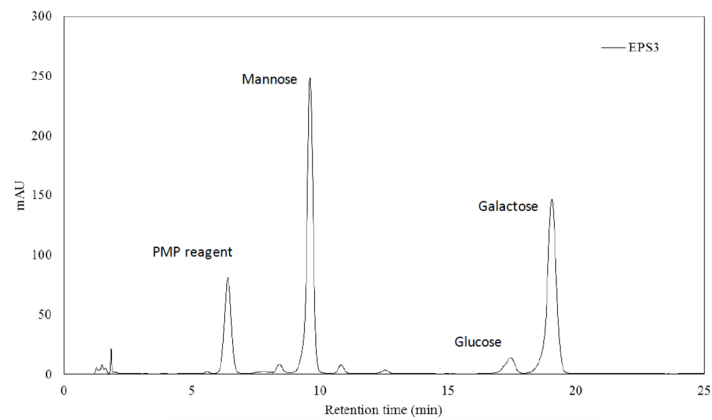


Figure S7. HPLC analysis of monosaccharide composition of EPS-3.

(a)

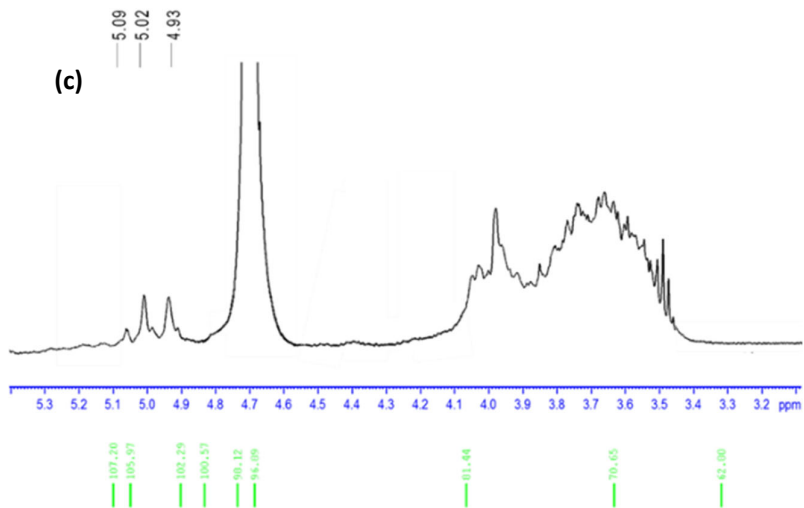
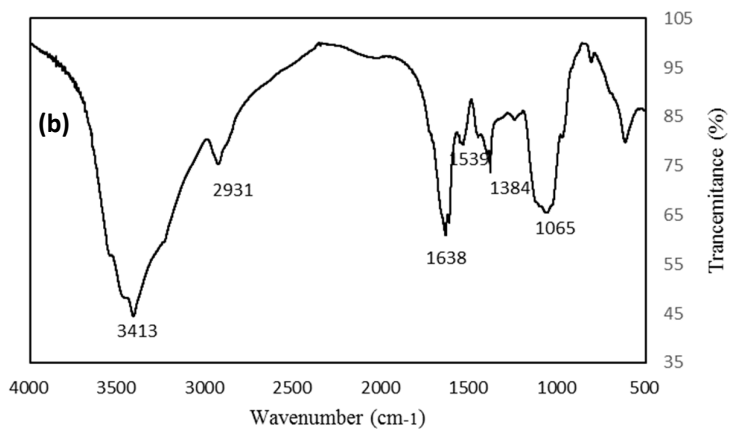
β -D-Galf

1

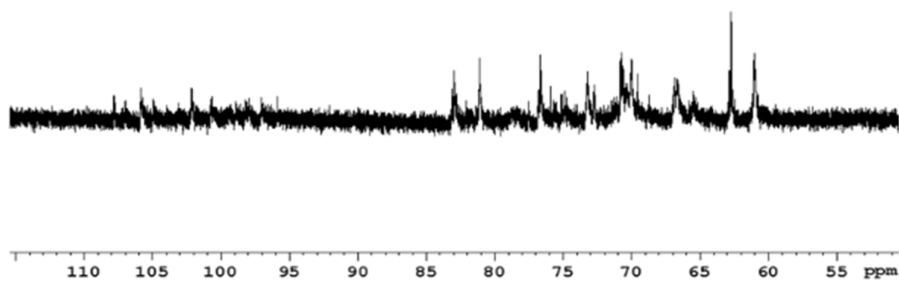
↓

3

{[6)- β -D-Glcp-(1→4)- α -D-Manp-(1→4)- α -D-Glcp-(1)₂→6)- α -D-Glcp-(1→[3)- α -D-Manp-(1→4)- α -D-Glcp-(1)₂→]_n}



(d)



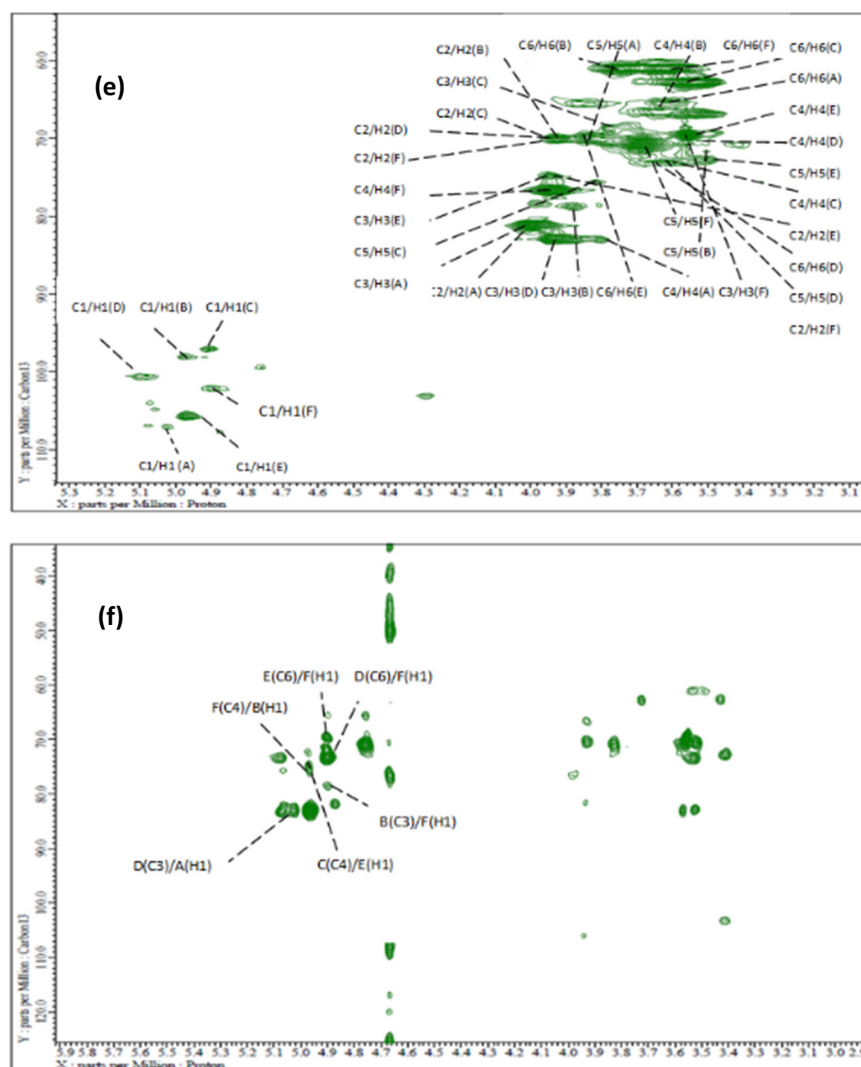


Figure S8 Structure analysis and characterization of EPS-3: (a) Repeating structure unit of an EPS fraction; (b) FT-IR spectrum; (c) ^1H NMR spectrum; (d) ^{13}C NMR spectrum; (e) HSQC NMR spectrum (2D); (f) HMBC spectrum (2D).

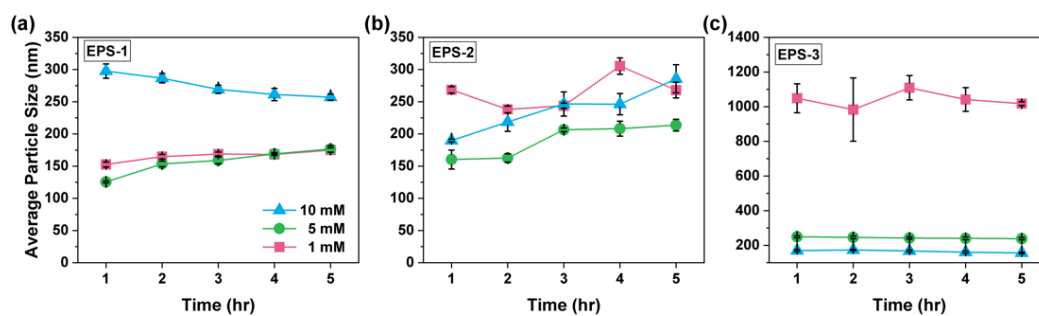


Figure S9. Average particle size of Ag NPs synthesized with 0.5 g/L EPS and various concentration of AgNO₃ (1, 5 and 10 mM) for (a) EPS-1, (b) EPS-2 and (c) EPS-3 as a function of reaction time. All the above experiments were conducted in the dark at 100 °C.

Table S4. The particle size comparison of Ag NPs synthesized with different EPS before and after dialysis.

EPS-Ag NPs	Particle hydro-diameter (nm)	
	Before dialysis	After dialysis
EPS-1 Ag NPs	158.9 ± 5.1	241.5 ± 3.3
EPS-2 Ag NPs	245.0 ± 17.0	430.0 ± 22.5
EPS-3 Ag NPs	206.4 ± 3.6	397.8 ± 8.9