Electronic Supplementary Material (ESI) for RSC Advances.

Plasmonically Active Nanorods for Delivery of Bio-active Agents and High-Sensitivity SERS Detection *in planta*

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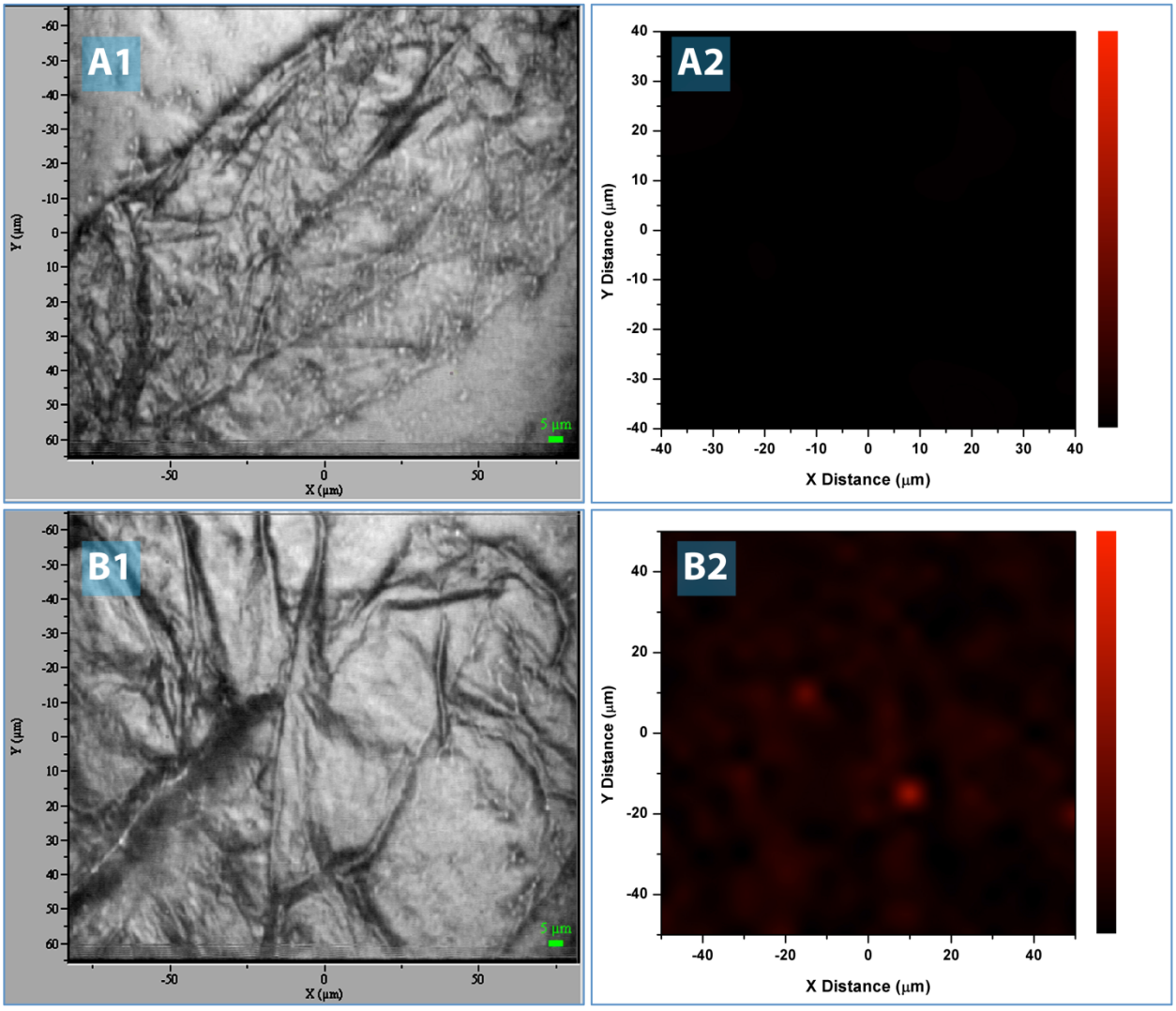
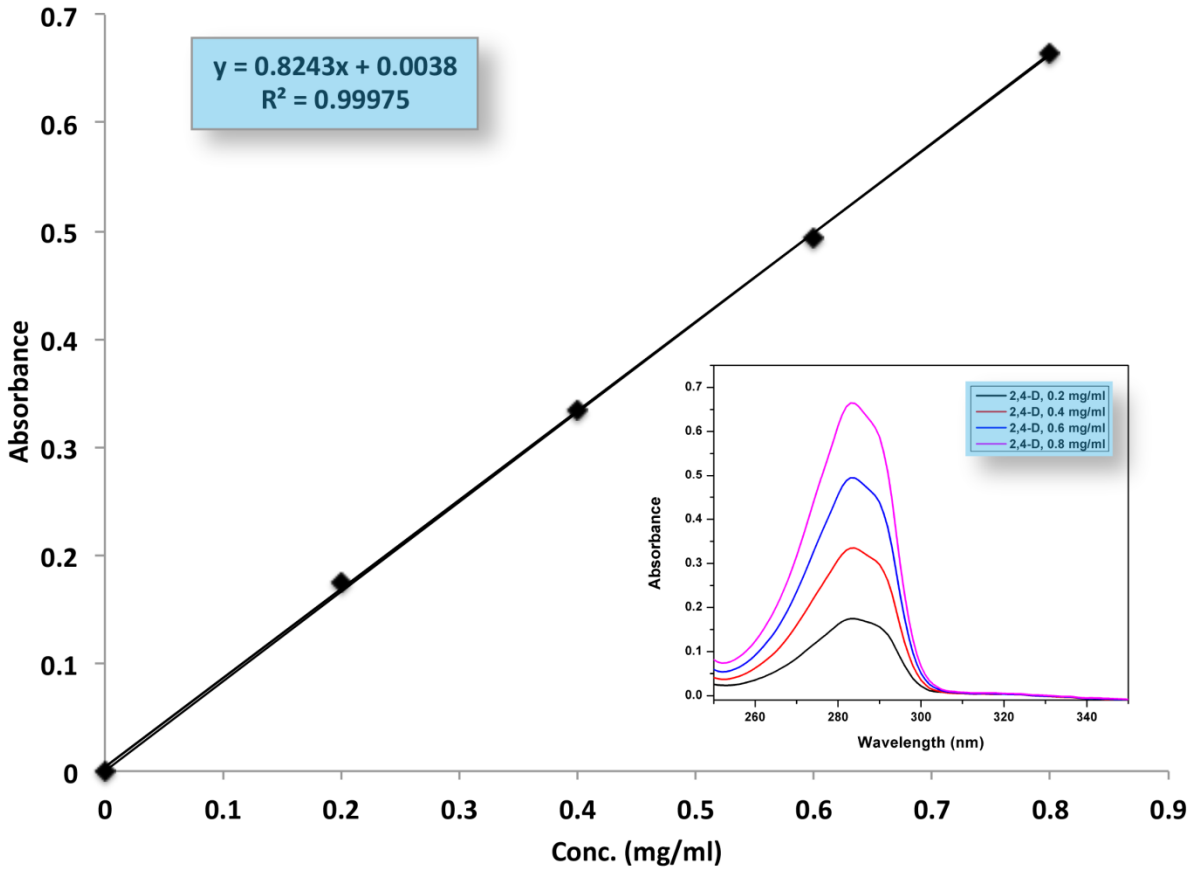


Supplementary Figure S1: Raman analysis was done on films formed with cells collected from the callus unexposed (control) and exposed to the AuNR/Ag-2,4-D conjugates (0.4µg/ml). A1 callus control optical image and A2 callus control Raman 2D mapping image. B1 callus optical image with (0.4µg/ml) conjugates and B2 callus Raman 2D mapping image with (0.4µg/ml) conjugates.



Supplementary Figure S2: Standard correlation between the 2,4-D concentration and its corresponding UV-Vis optical absorbance as measured from the intensity of the 283 nm peak.

	Total Length (cm)		Leaf number	Fresh Weight (g)		Dry Weight (g)	
	Shoot	Root		Shoot	Root	Shoot	Root
Control	1.85 ±0.10	6.57 ±0.74	11.27 ±1.32	0.071 ±0.01	0.0183 ±0.0039	0.0048 ±0.001	0.0015 ±0.00039
AuNR/Ag (50µg/ml)	1.91 ±0.10	6.19 ±0.47	12.3 ±0.75	0.073 ±0.01	0.0156 ±0.0028	0.0065 ±0.001	0.00086 ±0.00028

Supplementary Table S1: Phenotypic measurement of 21 days-old tomato seedlings grown on MS medium (control) and medium supplemented with 50µg/ml AuNR/Ag ±SE.