

Electronic Supplementary Information

Conjugation of multivalent ligands to gold nanoshells and designing a dual modality imaging probe

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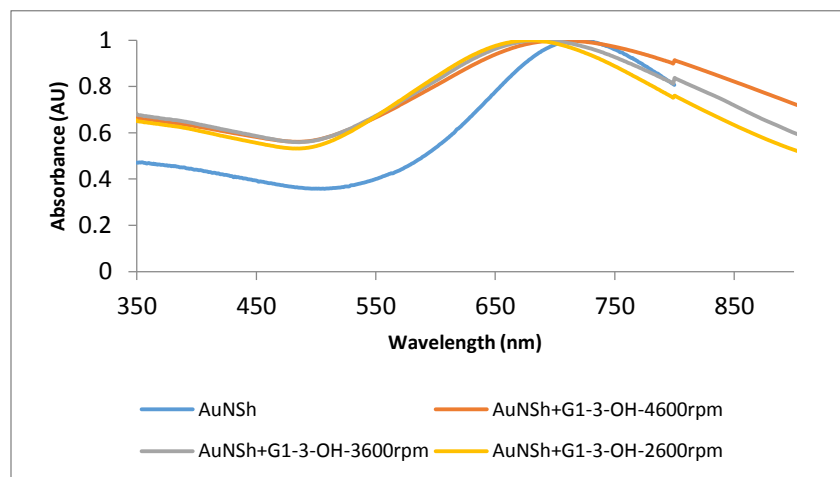


Figure S1: UV-Vis absorbance spectra of HAuNSh conjugated with G1-3-TEGOH and centrifuged at three different speeds; 4600 rpm (red), 3600 rpm (green), and 2600 rpm (purple). Note that the bump in the spectra at 800 nm is an artefact of the instrument when there is a change in the light source.

Table ST1: Summary of centrifugation speed study carried out on a Thermo Fisher Scientific Sorvall ST40R Centrifuge using an Thermo Scientific Auto-Lock TX-750 Rotor.

Speed	Batch	Absorbance (nm)	Diameter (nm)	Thickness (nm)
	AuNSh	718	30	4.3
A 4600 rpm	Conjugated	707	29	4.7
	Supernatant	496	28	5.0
		405	13	-
B 3600 rpm	Conjugated	688	31	5.0
	Supernatant	499	29	5.4
		404	14	-
C 2600 rpm	Conjugated	679	30	5.2
	Supernatant	497	27	5.7
		403	15	-

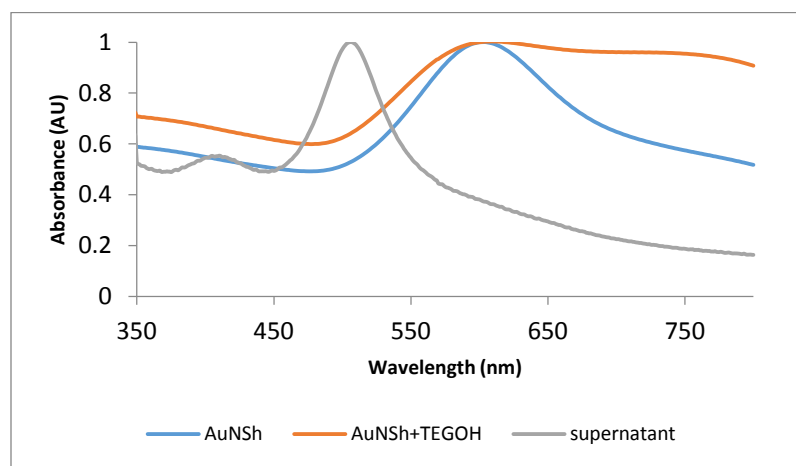


Figure S2: UV-Vis absorbance spectra of HAuNSh conjugated with TEGOH.

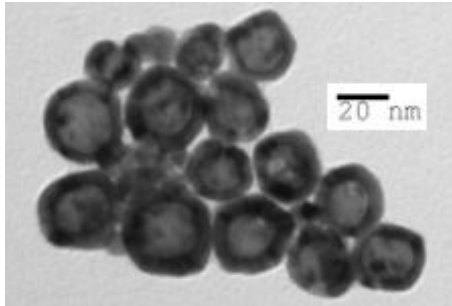
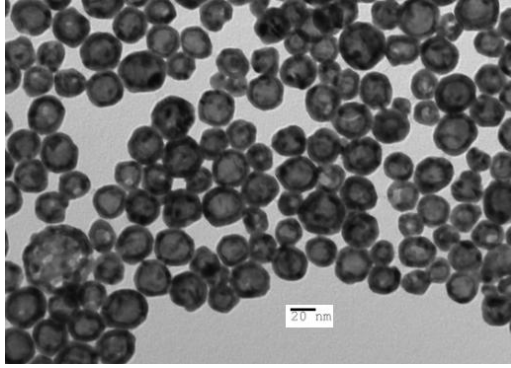


Figure S3: TEM images of HAuNSh conjugated with TEGOH.

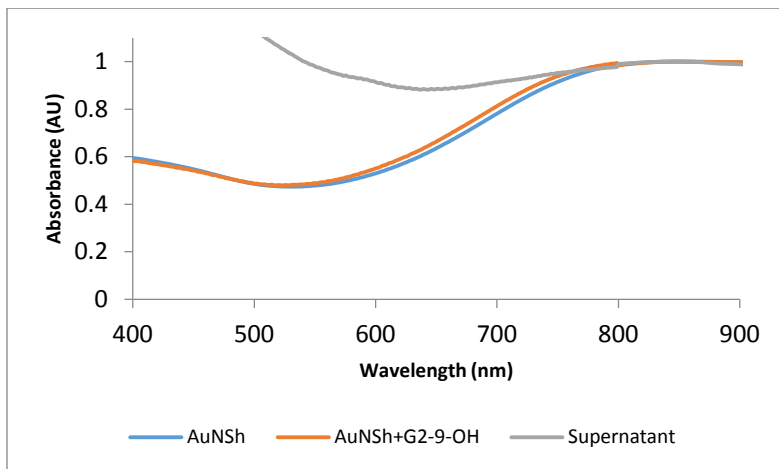


Figure S4: UV-Vis absorbance spectra of HAuNSh conjugated with G2-9-TEGOH.

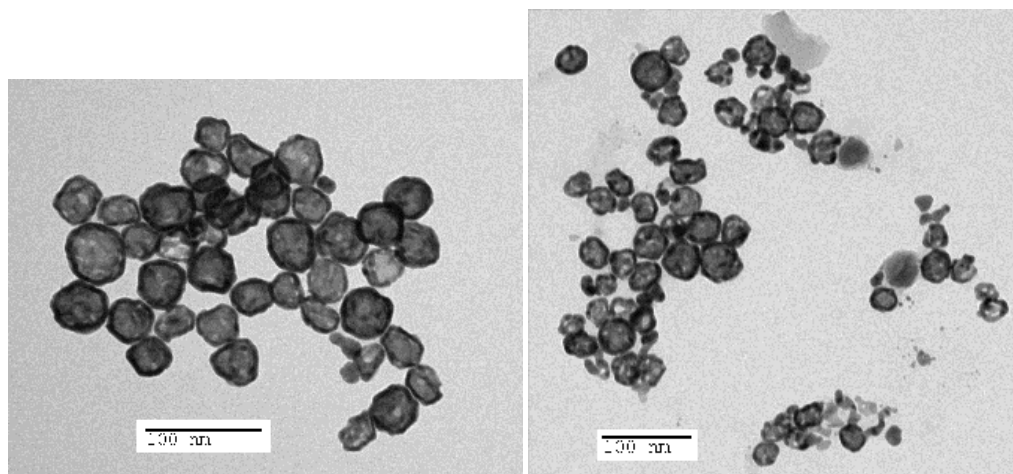


Figure S5: TEM image of the supernatant residue of the reaction of AuNSh with G2-9-TEGOH.

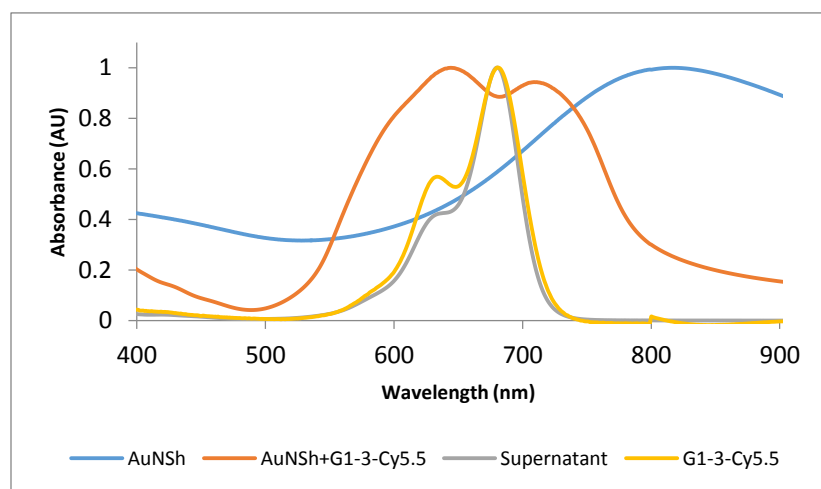


Figure S6: UV-Vis absorbance spectra for HAuNSh probes conjugated with G1-3-Cy5.5.

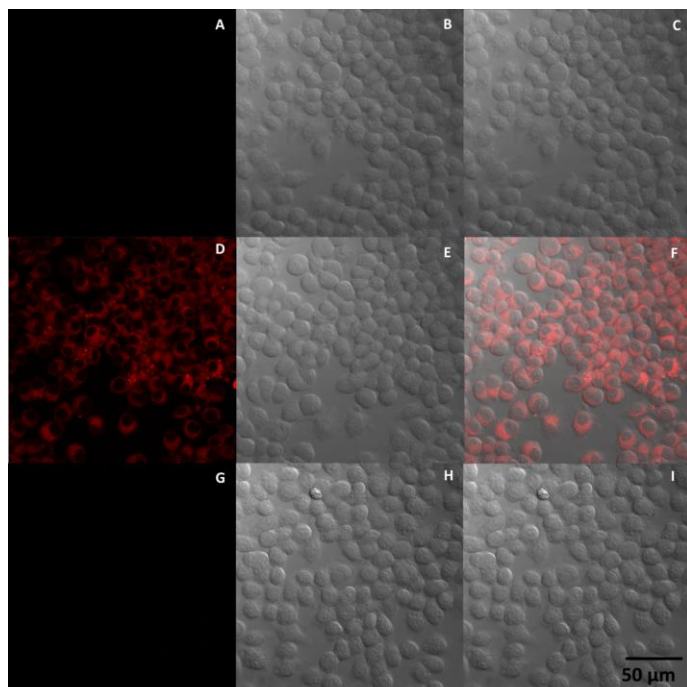


Figure S7: Confocal images of unlabeled J774 macrophages (A – C), labeled with G1-3-Cy5.5 ligand (D – F) and G1-3-Cy5.5-HAuNSh (G – I) for 4h. The 3 column panels shows the fluorescence (A,D,G), optical (B,E,H) and overlay of fluorescence and optical (C,F,I) images.