Electronic Supplementary Material (ESI) for Dalton Transactions.

Electronic Supplementary Information

In Vitro/In Vivo "Peeling" of Multilayered Aminocarboxylate Gold Nanoparticles Evidenced by a Kinetically Stable ^{99m}Tc-label: Implications for Glutathione-mediated Drug Release

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Table S1. Biodistribution results (mean ± SD, n=3; expressed as %I.D./organ and %I.D./g of organ) for **BBN-Au-DTDTPA-^{99m}Tc** after i.v. administration in CD-1 mice.

Organ	(% ID/organ)		(% ID/g)	
	1 h	**4 h**	**1 h**	**4 h**
Blood	1.7 ± 0.3	0.6 ± 0.2	1.1 ± 0.1	0.4 ± 0.1
Liver	16.3 ± 4.1	18.6 ± 3.9	11.0 ± 3.7	12.1 ± 1.5
Intestine	5.2 ± 0.8	5.2 ± 0.5	2.1 ± 0.2	2.1 ± 0.4
Spleen	0.7 ± 0.1	0.5 ± 0.1	4.8 ± 1.5	4.2 ± 1.0
Heart	0.07 ± 0.01	0.06 ± 0.01	0.44 ± 0.06	0.32 ± 0.02
Lung	0.40 ± 0.07	0.21 ± 0.01	1.6 ± 0.4	0.9 ± 0.2
Kidney	12.8 ± 2.3	11.2 ± 0.8	32.3 ± 7.8	31.3 ± 4.8
Muscle	4.1 ± 0.5	2.3 ± 0.6	0.42 ± 0.06	0.24 ± 0.06
Bone	3.9 ± 0.9	2.4 ± 0.3	1.6 ± 0.4	0.96 ± 0.11
Stomach	0.47 ± 0.08	0.15 ± 0.01	0.85 ± 0.02	0.27 ± 0.07
Pancreas	0.08 ± 0.01	0.05 ± 0.01	0.45 ± 0.03	0.35 ± 0.02
Brain	0.02 ± 0.01	0.01 ± 0.00	0.07 ± 0.05	0.03 ± 0.01
Excretion	51.8 ± 1.4	64.3 ± 0.9	-	-

Table S2. Biodistribution results (mean ± SD, n=3; expressed as %I.D./organ and %I.D./g of organ) for **^{99m}Tc-DTDTPA** after i.v. administration in CD-1 mice.

Organ	(% ID/organ)		(% ID/g)	
	1 h	**4 h**	**1 h**	**4 h**
Blood	5.0 ± 043	1.9 ± 0.3	2.6 ± 0.4	1.0 ± 0.2
Liver	18.3 ± 0.3	13.9 ± 0.4	10.2 ± 1.4	8.5 ± 1.4
Intestine	18.1 ± 1.1	19.0 ± 1.9	5.3 ± 0.3	6.6 ± 0.4
Spleen	0.13 ± 0.01	0.08 ± 0.01	0.71 ± 0.04	0.65 ± 0.03
Heart	0.19 ± 0.01	0.13 ± 0.03	0.89 ± 0.06	0.68 ± 0.03
Lung	0.62 ± 0.08	0.36 ± 0.04	1.8 ± 0.2	1.36 ± 0.08
Kidney	3.9 ± 0.3	3.6 ± 0.5	7.7 ± 0.1	8.2 ± 1.1
Muscle	5.5 ± 1.0	4.0 ± 0.6	0.43 ± 0.05	0.32 ± 0.03
Bone	1.5 ± 0.2	1.2 ± 0.1	0.48 ± 0.01	0.37 ± 0.01
Stomach	0.8 ± 0.1	0.5 ± 0.1	0.86 ± 0.02	0.7 ± 0.2
Pancreas	0.21 ± 0.01	0.14 ± 0.01	0.71 ± 0.02	0.6 ± 0.1
Brain	0.06 ± 0.01	0.02 ± 0.00	0.15 ± 0.02	0.05 ± 0.01
Excretion	33.8 ± 0.7	46.2 ± 0.6	-	-

Table S3. NAA results (mean ± SD, n=2; expressed as %I.D. (Au)/g of organ) for **BBN-Au-DTDTPA-^{99m}Tc** after i.v. administration in CD-1 mice.

Organ	(% ID/g)	
	1 h	**4 h**
Blood	1.15 ± 0.012	1.09 ± 0.009
Liver	3.85 ± 0.008	9.68 ± 0.016
Pancreas	0.55 ± 0.009	0.9 ± 0.008

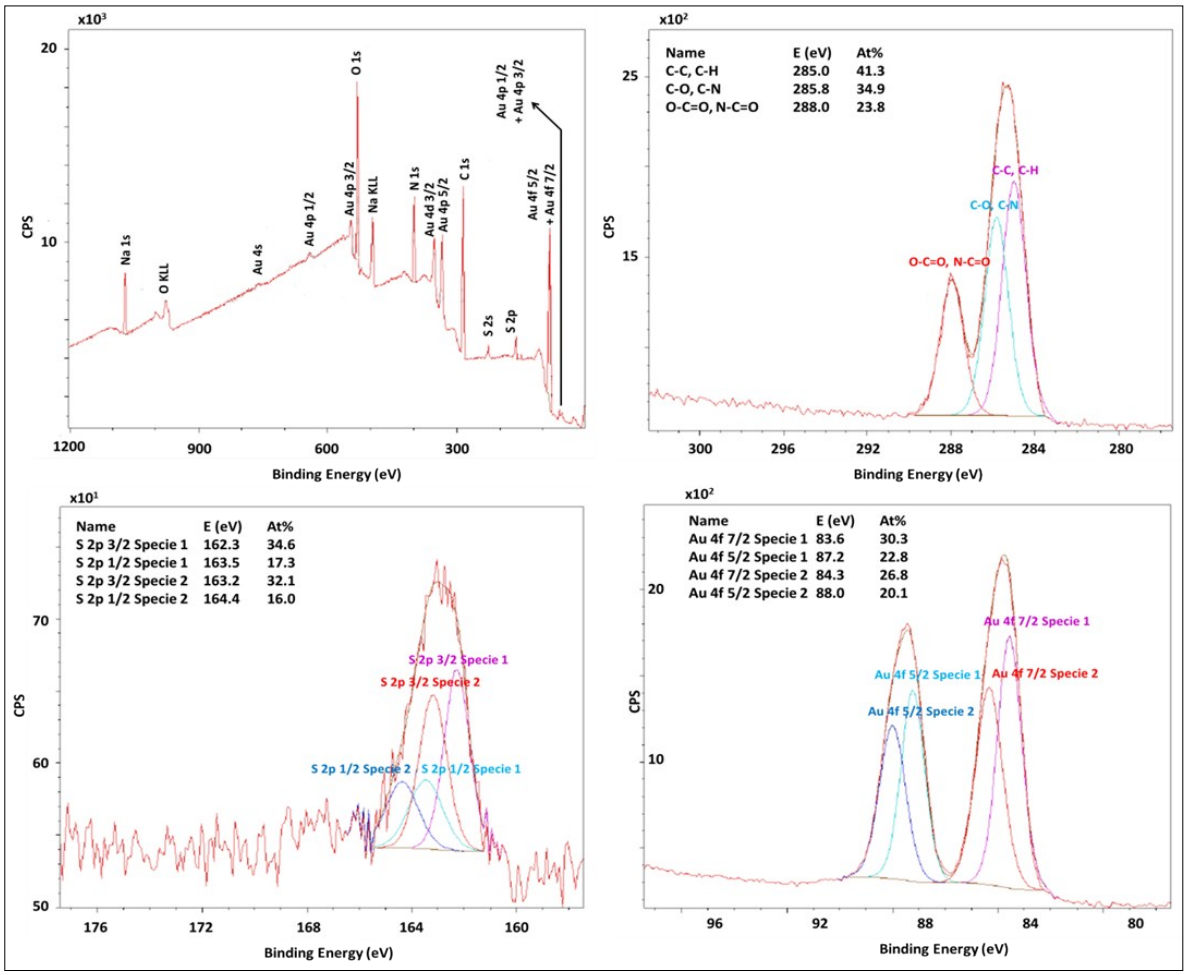

Figure S1. XPS spectrum and high-resolution XPS spectrum in the C1s, S2p and Au4f regions, for **BBN-Au-DTDTPA**.

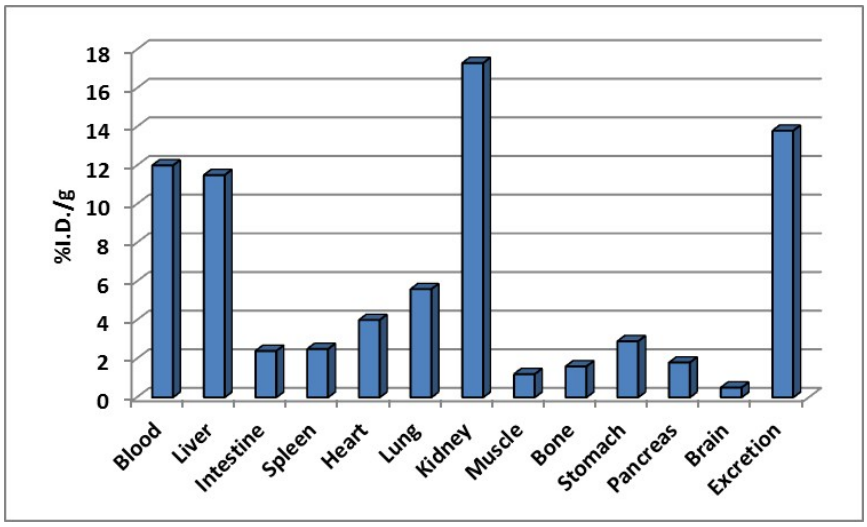

Figure S2. Biodistribution of *fac*-[^{99m}Tc$(H_2O)_3(CO)_3]^+$ in CD1 mice after tail vein injection, at 1 h p.i.. Data are expressed as mean of percentages of injected activity per gram of tissue (%ID/g), except for the overall excretion.

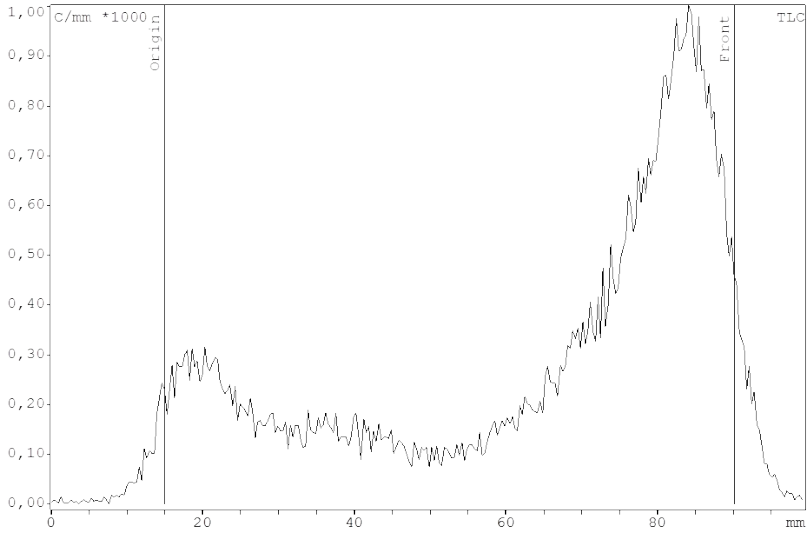

Figure S3: Radiochromatogram of a urine sample collected from a CD-1 mice injected with **BBN-Au-DTDTPA-^{99m}Tc**, at 1 h p.i., obtained using ITLC-SG plates and 6 M HCl MeOH (5:95) as eluent.