

A Dual Radiolabelling Approach for Tracking Metal Complexes: Investigating the Speciation of Copper Bis(thiosemicarbazones) in Vitro and in Vivo

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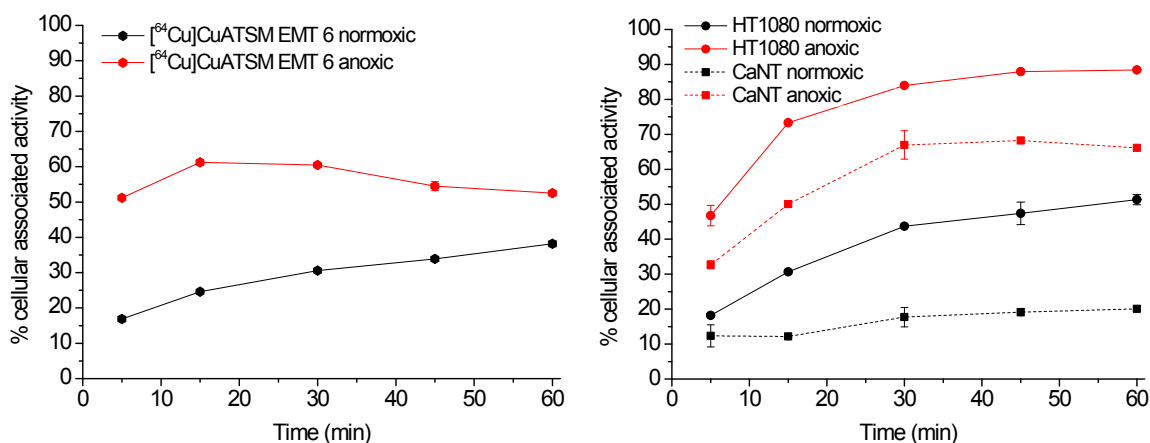


Figure S1 Percentage cellular associated activity of $[^{64}\text{Cu}]\text{Cu-ATSM}$ in (left) EMT6 and (right) HT1080 and CaNT cell lines over time, incubated either under normoxic (21% O_2 , 5% CO_2 , balance N_2) or anoxic (5% CO_2 , balance N_2) conditions. Errors (standard deviation) are within symbols if not indicated.

%ID/g	$[^{64}\text{Cu}]\text{Cu-ATSM}$	$[^{64}\text{Cu}]\text{CuL}$	$[^{123}\text{I}]\text{CuL}$	$[^{123}\text{I}]\text{H}_2\text{L}$	$[^{64}\text{Cu}]\text{Cu-acetate}$
Blood	0.73±0.05	0.68±0.08	1.1±0.86	1.31±0.05	0.66±0.04
Tumour	1.41±0.10	1.44±0.12	0.69±0.50	0.50±0.05	1.33±0.09
Muscle	0.29±0.07	0.20±0.01	0.30±0.25	0.34±0.00	0.26±0.04
Stomach	5.97±1.49	4.12±0.53	1.40±3.82	1.49±0.59	7.11±6.26
Small intestine	9.19±1.18	14.11±0.87	12.23±14.74	0.78±0.03	5.38±0.33
Large intestine	3.92±0.47	3.31±0.42	2.38±3.81	0.99±0.30	3.59±0.87
Fat	0.45±0.06	0.42±0.03	0.54±0.61	0.59±0.06	0.36±0.09
Spleen	1.53±0.21	1.25±0.08	3.02±3.60	0.88±0.02	3.03±1.57
Liver	10.03±1.02	7.69±0.81	8.59±7.66	0.83±0.08	8.44±1.07
Kidneys	6.03±0.66	4.55±0.45	3.32±2.90	2.59±0.46	5.01±0.98
Heart	1.28±0.11	0.98±0.10	0.95±0.76	1.01±0.02	0.97±0.09
Lungs	5.49±0.56	5.16±1.13	2.20±1.26	1.43±0.15	5.28±0.62
Thyroid	-	-	0.57±0.50	0.59±0.02	-
Ratio T/M	5.14±1.30	7.13±0.46	2.27±2.00	1.49±0.14	5.16±0.66

Table S1. Biodistribution data (%ID/g ±SD) of $[^{64}\text{Cu}]\text{Cu-ATSM}$ (n=4), $[^{64}\text{Cu}]\text{Cu-acetate}$ (n=3), $[^{64}\text{Cu}]\text{CuL}$ (n=4), $[^{123}\text{I}]\text{CuL}$ (n=2), $[^{123}\text{I}]\text{H}_2\text{L}$ (n=2), at 120 min p.i. in female CBA mice bearing CaNT tumours that were anaesthetised with isoflurane/air for 120 min dynamic PET/SPECT imaging sessions.