<u>Supporting Information for the article</u> 'Synthesis, crystal structures, and *in vitro* anticancer properties of new *N*-heterocyclic carbene (NHC) silver(I)- and gold(I)/(III)-complexes: A rare example of silver(I)-NHC complex involved in redox transmetallation'

## 22<sup>nd</sup> July 2016

**Note added after first publication:** The CCDC crystal structure data file for this article, originally published on 23<sup>rd</sup> June 2016, has been replaced. For further detail, please view the Correction addendum for this article.

	5a	6	7	8
Formula	$C_{22}H_{28}N_4AgPF_6$	C <sub>37</sub> H <sub>35</sub> N <sub>5</sub> AgBr	$C_{15}H_{17}N_4AuCl_3$	$C_{22}H_{32}N_4O_2AuCl$
Formula weight	601.32	697.19	542.63	616.93
Crystal system	Monoclinic	Triclinic	Monoclinic	Monoclinic
Space group	C2/c	<i>P</i> 1	<i>P</i> 21/c	<i>P</i> 21/c
Unit cell dimensions a (Å)	20.1752(4)	10.5279(2)	16.5289(7)	7.5995(8)
b (Å)	7.1076(2)	10.7966(3)	8.5610(3)	19.115(2)
c (Å)	16.9290(4)	14.6437(2)	14.5774(6)	15.8809(18)
α (°)	90.00	108.4830(10)	90.00	90.00
β(°)	96.6190(10)	91.926(2)	113.8300(10)	95.730(3)
γ (°)	90.00	100.9250(10)	90.00	90.00
V (Å <sup>3</sup> )	2411.39(10)	1542.15(6)	1886.90(13)	2295.5(4)
Ζ	4	2	4	4
Density (calcd) (gm/cm <sup>3</sup> )	1.656	1.501	1.910	1.785

Table S1. Crystal data and structure refinement details for compounds 5a, 6, 7, and 8.

Abs (mm <sup>-1</sup> )	coeff	0.967	0.698	8.220	6.551
F(000)		1216	717	1032	1216
Crystal (mm)	size	$\begin{array}{rrrr} 0.40 \ \times \ 0.23 \ \times \\ 0.08 \end{array}$	$\begin{array}{rrrr} 0.39 \ \times \ 0.25 \ \times \\ 0.13 \end{array}$	$\begin{array}{rrrr} 0.34 \ \times \ 0.14 \ \times \\ 0.14 \end{array}$	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$
Tempera (K)	ture	100	100	100	100
Radiation	n (Å)	MoKa 0.71073	MoKa 0.71073	MoKa 0.71073	MoKa 0.71073
θ Min, (°)	max	2.03, 32.70	1.98, 30.12	1.35, 32.65	1.67, 29.99
Dataset		-30:30;-10:10;- 25: 23	-14:14;-15:15;- 20:20	-24:25;-12:12;- 22:18	-10:10;-26:26;- 22:22
Tot.; Data	Uniq.	28427	32999	25380	6583
R (int)		0.0371	0.0253	0.0238	0.0725
Nref, Np	ar	4411, 158	8981, 340	6791, 196	5215, 276
R, wR <sub>2</sub> , S	S	0.0468, 0.0682, 1.21	0.1683, 0.3752, 2.37	0.0758, 0.2514, 1.15	0.0650, 0.1524, 1.14



Concentrations of test sample in  $\mu M$ 

**Figure S1.** Effects of increasing amounts of salts and carbene complexes on the percentage inhibition of HCT 116 cell proliferation.



**Figure S2.** Effects of increasing amounts of Au-carbene complexes on the percentage inhibition of MCF-7 (A), PC3 (B), and U937(C) cell proliferation.