New findings in the signaling pathways of *cis* and *trans* platinum iodido complexes' interaction with DNA of cancer cells.

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SUPPLEMENTARY INFORMATION

S.1. Synthesis and characterization of the platinum complexes.

S1.1. Syntheses of the chlorido complexes:

We used our previous methods, following the exact procedure that we have already published. Briefly the characterization as follows:

cis-[PtCl$_2$(ipa)$_2$]**1:** Yield 92%. Elemental analysis CHN, found: C, 18.70; H, 4.60; N, 7.30. Calc for $C_6H_{18}N_2Cl_2Pt$: C, 18.75; H, 4.72; N, 7.29. δ_H(300.13 MHz; DMSO-d$_6$) 1.2 (6 H, d, J_{HH} 6.5, CH$_3$), 3.1 (1 H, sept, J_{HH} 6.5, CH), 4.7 (* bs, NH$_2$); δ_C(125.7 MHz; DMSO-d$_6$) 23.5 (CH$_3$), 47.6 (CH).

trans-[PtCl$_2$(ipa)(dma)]**2**, Yield 49%. Elemental analysis CHN, found: C, 13.50; H, 3.70; N, 7.90. Calc for $C_4H_{14}N_2Cl_2Pt$: C, 13.48; H, 3.96; N. 7.86. δ_H(300.13 MHz; CDCl$_3$) 1.33 (6 H, d, J_{HH} 6.5, CH$_3$-ipa), 2.5 (3 H, t, J_{HH} 6.5, CH$_3$-ma), 3.3 (1 H, sept, J_{HH} 6.5, CH), 3.4 (* bs, NH$_2$); δ_C(75.47 MHz; CDCl$_3$) 23.97 (CH$_3$-ipa), 33.22 (CH$_3$-ma), 48.38 (CH); δ_{Pt}(64.53 MHz; CDCl$_3$; Na$_2$PtCl$_6$) -2175.
*Signals that interchanged with the D$_2$O adition.

S1.2. Syntheses of the iodido complexes:

Dhara's method[1] and Rochon's method[2] were followed with a few modifications:

trans-[PtI$_2$(ipa)$_2$] **3**: *cis*-PtI$_2$(ipa)$_2$ **4** 0.500g (0.9 mmol) were suspended in water and the isopropylamine (4,5 mmol) was added to the solution and heated at reflux temperature until turned to clear solution. The clear solution was concentrated at high temperature (100ºC) until detection of a bright orange solid which was allowed to stand overnight at 4ºC until complete precipitation. Then the orange/yellow solid was filtered off, wash with warm water and dried in a Buchi glass oven with drying tube assembly. Afterwards recrystallization in

chloroform/ether is in some cases requiredorange solid. Yied: 59%. Anal. Found for $C_6H_{19}N_2O_{0.5}I_2Pt$: C, 11.96; H, 3.10; N, 5.03Calcd: C, 12.00; H, 3.30; N, 4.78. NMR(Acetone-d^6) ppm. δ (^{1}H): 1.3 (d, 6H) 3.4 (sp, 1H) 3.9 (b.s, 2H). δ (^{13}C): 24.5(C1), 51.5(C2), δ (^{195}Pt) -3330ppm.

cis-$[PtI_2(ipa)_2]$**4.** Dhara's method[1] and Rochon's method[2] were followed with a few modifications: 2.4 mmol of K_2PtCl_4 were dissolved in water and KI was added in a large excess (1:10) to produce a dark solution. After 15 minutes of stirring (to complete K_2PtI_4 formation), the base (4.8 mmol) was added to the solution and stirred at room temperature until the yellow precipitated had been formed. Then, the yellow solid was immediately isolated, washed with extensively warm water, EtOH and Ether and dried under vacuum. yellow solid. Yield: 54%. NMR (Acetona-d_6): δ(^{1}H): 1.18(d, J=6.5 Hz, 6H, CH_3), 3.46 (sept., J=6.3Hz,1H,CH), 4.25 (b.s, 2H); δ (^{13}C) 23.3 (2 CH_3), 48.9(CH); δ (^{195}Pt) -3507.27 ppm. Anal. Calcd for $C_6H_{18}N_2I_2Pt$ C, 12.70; H, 3,20; N, 4.94. Found: C, 12.00; H, 3.64; N, 5.00.

S1.3.References

1. Dhara, S. C., A rapid method for the Synthesis of cis-$[Pt(NH_3)_2Cl_2]$. *Ind. J. Chem.* **1970,** *8*, 193-194.
2. Rochon, F. D.; Buculei, V., Multinuclear NMR study and crystal structures of complexes of the types cis- and trans-Pt(amine)$_2$I$_2$. *Inorg. Chim. Acta* **2004,** *357* (8), 2218-2230.

Table SM1. Crystal data of *trans*-$[Pt(9\text{-}EtG)_2(ipa)_2](NO_3)_2$

Chemical formula	$C_{20}H_{36}N_{14}O_{10}Pt$
formula weight	827.71
Temperature	100(2) K
Wavelength	0.71073 Å
Crystal size	0.08 x 0.10 x 0.18 mm
Crystal habit	Incoloro prismático
Crystal system	Triclínico
Space group	P-1
Unit Cell dimensions	a = 7.9762(12) Å α = 104.586(7) b = 9.7305(14) Å β = 92.179(7) c = 10.3506(13) Å ϒ = 96.643(7)
Volumen	770.34(19) Å^3
Z	1

Density(calculated)	1.784 mg/cm^3
Absorption coefficient	4.628 mm^{-1}
F(000)	412

CCDC 1946387contains the supplementary crystallographic data for this paper. These data can be obtained free of charge via http://www.ccdc. cam.ac.uk/conts/retrieving.html (or from the CCDC, 12 Union Road, Cambridge CB2 1EZ, UK; Fax: +44 1223 336033; E-mail: deposit@ccdc.cam.ac.uk).

Table SM2: Selected bond distances and angles for the structure of *trans*-[Pt(9-EtG)$_2$(ipa)$_2$](NO$_3$)$_2$

Bond distances (Å)	
Pt_1 - N_7	2.019(4)
Pt_1 - N_1	2.061(4)
angles (°)	
N_1 - Pt_1 - N_1	180.0
N_7 - Pt_1 - N_7	180.0(2)
N_7 - Pt_1 - N_1	91.05