Supporting Information

On the Dual Antitumor and Anti-angiogenic Activity of Organoplatinum(II) Complexes

Ana Zamora,[†] Sergio A. Pérez,[†] Venancio Rodríguez,[†] Cristoph Janiak,[‡] Gorakh S. Yellol,[†] and José Ruiz[*,†]

[†]Departamento de Química Inorgánica and Regional Campus of International Excellence "Campus Mare Nostrum", Universidad de Murcia, and Institute for Bio-Health Research of Murcia (IMIB-Arrixaca), E-30071 Murcia, Spain. Fax: +34868884148; Tel: +34868887477; E-mail: jruiz@um.es

[‡]Institut für Anorganische Chemie und Strukturchemie, Heinrich-Heine-Universität Düsseldorf, Universitätsstr. 1, D-40225 Düsseldorf, Germany.

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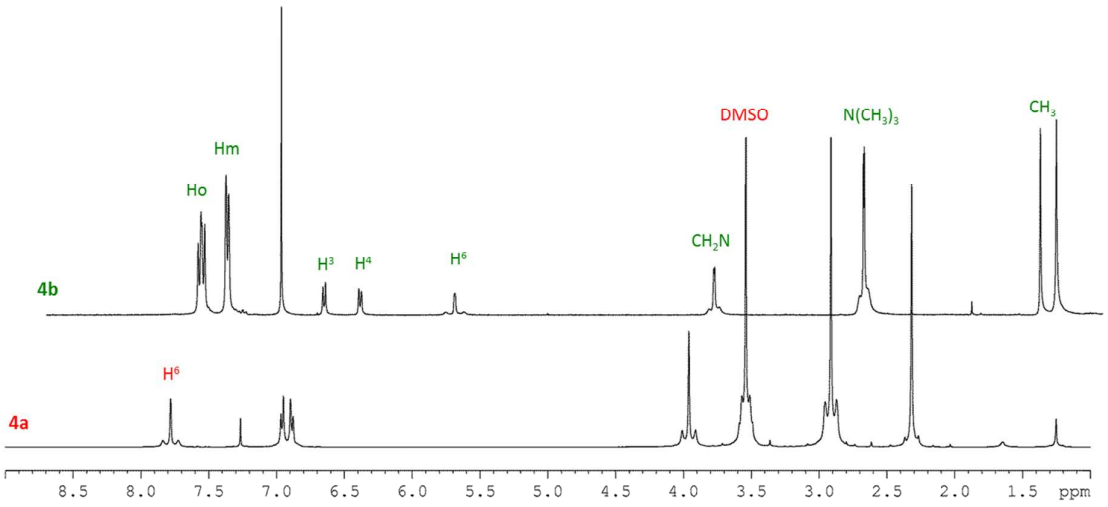


Figure S1. Comparison of **4a** and **4b** ^{1}H NMR spectra in $CDCl_3$.

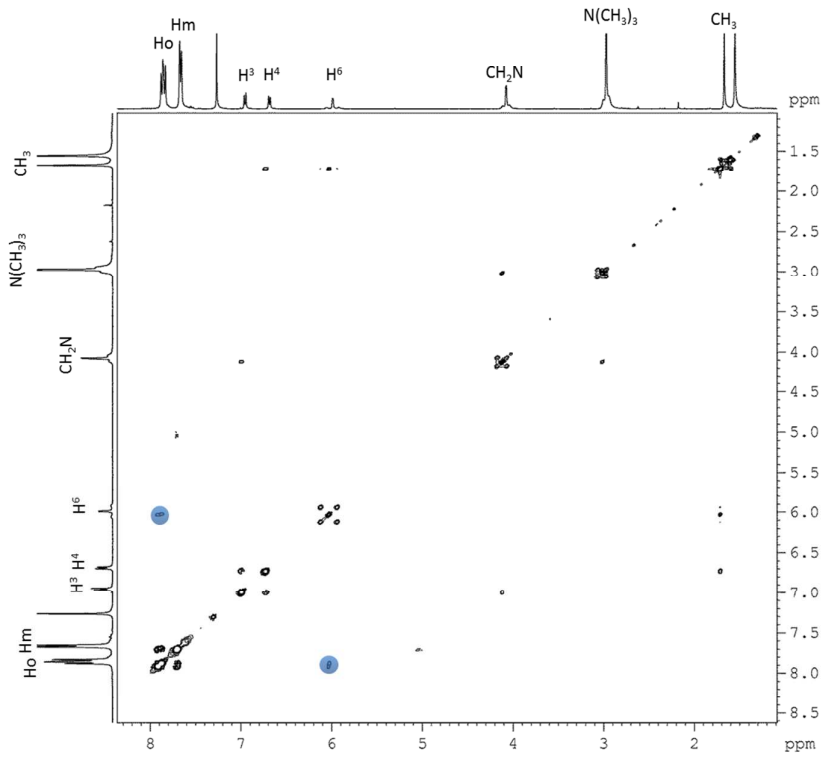
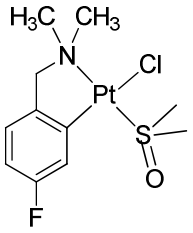


Figure S2. NOESY experiment in $CDCl_3$ of complex **4b** showing the NOE effect between H^6 of substituted dmba and Ho of $P(C_6H_4CF_3\text{-}p)_3$.

Crystal data and structure refinement for Compound 8a and 2b

For X-ray crystal 8a:

Compound code	Solvent used for crystalization	Structure
8a Chlorido-(N,N-dimethyl(4-fluoro)benzylamine-kN,kC)(dimethylsulfoxide-kS)platinum(II)	CH_2Cl_2/Toluene/Hexane	

The structure can be solved in space group $P2_1/c$ or its non-standard setting $P2_1/n$. Here, space group $P2_1/c$ was chosen.

The data set and refinement is of high quality with very good R-values. The five largest residual peaks lie all within 1 Å of the Pt atom.

Table S1. Crystal data and structure refinement for **8a**.

Empirical formula	$C_{11}H_{17}ClFNOPtS$
Formula weight	460.86
Temperature	100(2) K
Wavelength	0.71073 Å
Crystal system	Monoclinic
Space group	P $2_1/c$
Unit cell dimensions	a = 5.9315(3) Å α= 90°
	b = 12.1005(5) Å β=103.0670(10)°
	c = 19.7000(8) Å γ = 90°
Volume	1377.34(11) $Å^3$
Z	4
Density (calculated)	2.222 Mg/m^3
Absorption coefficient	10.528 mm^{-1}

F(000)	872
Crystal size	0.29 x 0.29 x 0.17 mm^3
Theta range for data collection	3.37 to 30.51°
Index ranges	-8<=h<=8, -17<=k<=17, -28<=l<=28
Reflections collected	43175
Independent reflections	4204 [R(int) = 0.0676]
Completeness to theta = 30.51°	99.9 %
Absorption correction	Semi-empirical from equivalents
Max. and min. transmission	0.2677 and 0.1502
Refinement method	Full-matrix least-squares on F^2
Data / restraints / parameters	4204 / 0 / 158
Goodness-of-fit on F^2	1.126
Final R indices [I>2sigma(I)]	R1 = 0.0217, wR2 = 0.0526
R indices (all data)	R1 = 0.0236, wR2 = 0.0533
Largest diff. peak and hole	2.255 and -2.295 e.$Å^{-3}$

Table S2. Atomic coordinates (x 10^4) and equivalent isotropic displacement parameters ($Å^2$x 10^3) for **8a**. U(eq) is defined as one third of the trace of the orthogonalized U^{ij} tensor.

	x	y	z	U(eq)
Pt	5063(1)	1796(1)	3789(1)	8(1)
Cl	7911(1)	1882(1)	4868(1)	16(1)
S	6430(1)	157(1)	3589(1)	10(1)
F	840(4)	1035(2)	1086(1)	29(1)
O	5361(4)	-474(2)	2965(1)	18(1)
N	3502(5)	3301(2)	3976(1)	13(1)
C(1)	2717(5)	1926(2)	2886(2)	12(1)
C(2)	919(5)	2674(2)	2905(2)	14(1)
C(3)	-923(5)	2829(3)	2336(2)	19(1)

C(4)	-987(6)	2268(3)	1717(2)	21(1)
C(5)	844(6)	1574(3)	1692(2)	18(1)
C(6)	2675(5)	1389(2)	2252(2)	15(1)
C(7)	1033(5)	3248(2)	3584(2)	15(1)
C(8)	4712(6)	4213(3)	3702(2)	17(1)
C(9)	3522(6)	3536(3)	4721(2)	19(1)
C(10)	9431(5)	227(3)	3615(2)	19(1)
C(11)	6409(6)	-718(3)	4310(2)	18(1

Table S3. Bond lengths [Å] and angles [°] for 8a.

Pt-C(1)	2.001(3)	C(9)-N-Pt	115.51(19)
Pt-N	2.113(2)	C(7)-N-Pt	106.83(17)
Pt-S	2.2112(7)	C(6)-C(1)-C(2)	117.5(3)
Pt-Cl	2.4006(7)	C(6)-C(1)-Pt	128.6(2)
S-O	1.465(2)	C(2)-C(1)-Pt	113.9(2)
S-C(10)	1.771(3)	C(3)-C(2)-C(1)	121.9(3)
S-C(11)	1.774(3)	C(3)-C(2)-C(7)	121.8(3)
F-C(5)	1.360(4)	C(4)-H(4)	0.9500
N-C(8)	1.484(4)	C(5)-C(6)	1.380(4)
N-C(9)	1.491(4)	C(1)-C(2)-C(7)	116.2(3)
N-C(7)	1.495(4)	C(4)-C(3)-C(2)	120.2(3)
C(1)-C(6)	1.402(4)	C(4)-C(3)-H(3)	119.9
C(1)-C(2)	1.406(4)	C(2)-C(3)-H(3)	119.9
C(2)-C(3)	1.391(4)	C(5)-C(4)-C(3)	117.5(3)
C(2)-C(7)	1.495(4)	C(5)-C(4)-H(4)	121.2
C(3)-C(4)	1.388(5)	C(3)-C(4)-H(4)	121.2
C(3)-H(3)	0.9500	F-C(5)-C(6)	117.9(3)
C(4)-C(5)	1.383(5)	F-C(5)-C(4)	118.5(3)
C(1)-Pt-N	81.03(11)	C(6)-C(5)-C(4)	123.6(3)
C(1)-Pt-S	97.00(8)	C(1)-C(2)-C(7)	116.2(3)
N-Pt-S	175.46(7)	C(4)-C(3)-C(2)	120.2(3)
C(1)-Pt-Cl	173.02(8)	C(4)-C(3)-H(3)	119.9
N-Pt-Cl	93.21(7)	C(2)-C(3)-H(3)	119.9
S-Pt-Cl	89.02(2)	C(5)-C(4)-C(3)	117.5(3)
O-S-C(10)	106.86(15)	C(5)-C(6)-C(1)	119.3(3)
O-S-C(11)	106.35(14)	C(5)-C(6)-H(6)	120.4
C(10)-S-C(11)	101.22(15)	C(1)-C(6)-H(6)	120.4
O-S-Pt	120.65(9)	N-C(7)-C(2)	108.9(2)
C(10)-S-Pt	111.03(11)	N-C(7)-H(7A)	109.9

C(11)-S-Pt	108.91(11)	C(2)-C(7)-H(7A)	109.9
C(8)-N-C(9)	108.6(2)	N-C(7)-H(7B)	109.9
C(8)-N-C(7)	110.0(2)	C(2)-C(7)-H(7B)	109.9
C(9)-N-C(7)	107.8(2)	H(7A)-C(7)-H(7B)	108.3
C(8)-N-Pt	108.08(18)	N-C(8)-H(8A)	109.5

The packing in the structure of **8a** is organized by intermolecular C-H···F, [1-3] C-H···Cl,[4,5] C-H···O[6] and C-H···π interactions[7-12] (Table S3, Figure S3). There are no π-π interactions.[13,14]

Table S4

Analysis of Potential Hydrogen Bonds and Schemes with d(D...A) < R(D)+R(A)+0.50, d(H...A) < R(H)+R(A)-0.12 Ang., D-H...A > 100.0 Deg

Note: - ARU codes in [] are with reference to the Coordinates printed above (Possibly transformed, when MOVE .NE. 1.555)

Donor --- H....Acceptor	[ARU]	D- H	H...A	D...A	D - H...A
C(3)--H(3)..O	[2555.01]	0.95	2.38	3.286(4)	160
C(8)--H(8A)..O	[2655.01]	0.98	2.36	3.297(4)	159
C(11)--H(11A)..Cl	[3656.01]	0.98	2.77	3.612(4)	144
C(7) --H(7A)..F	[2555.01]	0.99	2.74	3.654(3)	154

:: No Classic Hydrogen Bonds Found

Translation of ARU-Code to CIF and Equivalent Position Code

[3656.] = [3_656] =1-x,-y,1-z
[2655.] = [2_655] =1-x,1/2+y,1/2-z
[2555.] = [2_555] =-x,1/2+y,1/2-z

Analysis of X-H...Cg(Pi-Ring) Interactions (H..Cg < 3.0 Ang. - Gamma < 30.0 Deg)

- Cg(J) = Center of gravity of ring J (Plane number above)
- H-Perp = Perpendicular distance of H to ring plane J
- Gamma = Angle between Cg-H vector and ring J normal
- X-H..Cg = X-H-Cg angle (degrees)
- X..Cg = Distance of X to Cg (Angstrom)
- X-H, Pi = Angle of the X-H bond with the Pi-plane (i.e.' Perpendicular = 90 degrees, Parallel = 0 degrees)

X--H(I) Res(I) Cg(J)	[ARU(J)]	H..Cg	H-Perp	Gamma	X-H..Cg	X..Cg
C(10) -H(10C) [1] -> Cg(2)	[1655.01]	2.75	2.56	21.68	162	3.696(4)

[1655] = 1+X,Y,Z

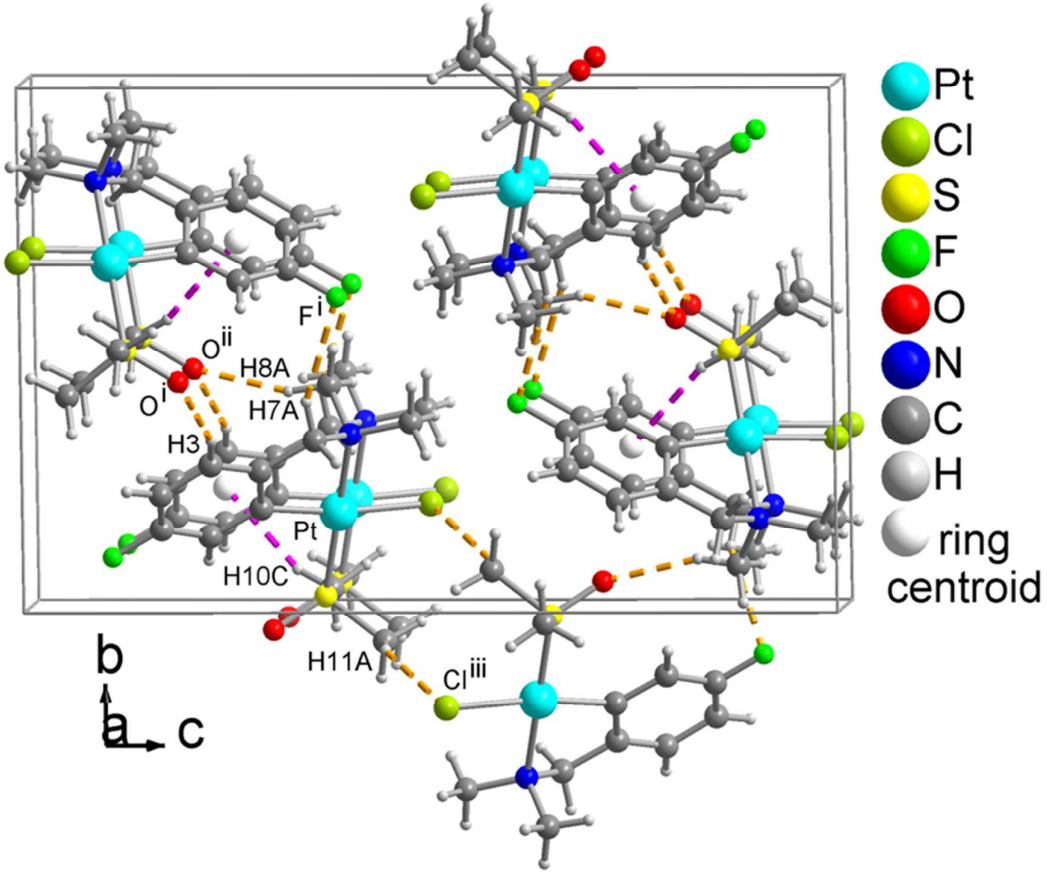
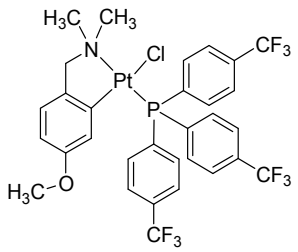


Figure S3. Unit-cell packing in **8a** with intermolecular supramolecular C-H···F, C-H···Cl and C-H···O interactions indicated as dashed orange lines, C-H···π interactions as dashed pink lines. Symmetry transformations: i = x,1/2+y,1/2-z; ii = 1-x,1/2+y,1/2-z; iii = 1-x,-y,1-z.

X-ray Crystal Structure Analysis for X-ray crystal 2b:

Compound code	Solvent used for crystalization	Structure
2b Chlorido-(N,N-dimethyl(4-methoxy)benzylamine-κN,κC)-tris(4-trifluoromethylphenyl)-phosphane-platinum(II)	CH_2Cl_2/Toluene/Hexane	

The structure of **2b** was solved in space group $P2_1/c$. The data set and refinement is of high quality with very good R-values. The residual electron density is very small for a Pt structure and six of the ten "largest" residual peaks lie all within 1.3 Å of the Pt atom.

Table S5. Crystal data and structure refinement for **2b**.

Empirical formula	$C_{31}H_{26}Cl\ F_9\ N\ O\ Pt\ S$
Formula weight	861.04
Temperature	100(2) K
Wavelength	0.71073 Å
Crystal system	Monoclinic
Space group	P 21/c
Unit cell dimensions	a = 17. 3951(8) Å α = 90° b = 14.9557(7) Å β =98.576(2)° c = 11.9109(5) Å γ = 90°
Volume	3064.0(2) $Å^3$
Z	4
Density (calculated)	1.867 Mg/m^3
Absorption coefficient	4.801 mm^{-1}
F(000)	1672
Crystal size	0.41 x 0.38 x 0.18 mm^3
Theta range for data collection	2.20 to 26.35°
Index ranges	-21<=h<=21, -18<=k<=18, -14<=l<=14
Reflections collected	76623
Independent reflections	6258 [R(int) = 0.0461]
Completeness to theta = 26.35°	100.0 %
Absorption correction	Semi-empirical from equivalents
Max. and min. transmission	0.4786 and 0.2436
Refinement method	Full-matrix least-squares on F^2
Data / restraints / parameters	6258 / 0 / 437
Goodness-of-fit on F^2	1.084
Final R indices [I>2sigma(I)]	R1 = 0.0185, wR2 = 0.0409
R indices (all data)	R1 = 0.0206, wR2 = 0.0418
Largest diff. peak and hole	0.725 and -0.750 $e.Å^{-3}$

Table S6. Atomic coordinates (x 10^4) and equivalent isotropic displacement parameters ($Å^2$x 10^3) for **2b**. U(eq) is defined as one third of the trace of the orthogonalized U^{ij} tensor.

	x	y	z	U(eq)
Pt	1512(1)	3433(1)	5626(1)	8(1)
Cl	2133(1)	2196(1)	4847(1)	16(1)
C(1)	904(1)	4182(2)	6578(2)	11(1)
C(2)	93(1)	4106(2)	6277(2)	14(1)
C(3)	-411(2)	4440(2)	6982(2)	18(1)
C(4)	-124(2)	4841(2)	8005(2)	20(1)
C(5)	677(2)	4900(2)	8332(2)	16(1)
C(6)	1186(1)	4584(2)	7625(2)	12(1)
C(7)	-182(1)	3622(2)	5195(2)	16(1)
N	387(1)	2895(1)	5041(2)	12(1)
C(8)	236(2)	2090(2)	5706(2)	21(1)
C(9)	296(2)	2651(2)	3820(2)	20(1)
O	908(1)	5266(1)	9386(2)	22(1)
C(10)	1719(2)	5320(2)	9785(2)	22(1)
P	2645(1)	4130(1)	5877(1)	9(1)
C(11)	2702(1)	5233(2)	6548(2)	12(1)
C(12)	3196(1)	5443(2)	7543(2)	14(1)
C(13)	3160(2)	6276(2)	8047(2)	16(1)
C(14)	2633(1)	6905(2)	7551(2)	13(1)
C(15)	2151(2)	6716(2)	6538(2)	17(1)
C(16)	2183(1)	5883(2)	6047(2)	15(1)
C(17)	2548(2)	7788(2)	8118(2)	21(1)
F(1)	2420(1)	8460(1)	7392(2)	45(1)
F(2)	3167(1)	8003(1)	8865(2)	41(1)
F(3)	1942(1)	7785(1)	8692(2)	47(1)
C(18)	3439(1)	3528(2)	6722(2)	11(1)
C(19)	4169(1)	3405(2)	6395(2)	13(1)
C(20)	4768(1)	3019(2)	7141(2)	14(1)
C(21)	4642(1)	2768(2)	8215(2)	12(1)
C(22)	3910(1)	2859(2)	8539(2)	15(1)

C(23)	3311(1)	3227(2)	7786(2)	14(1)
C(24)	5298(1)	2409(2)	9043(2)	17(1)
F(4)	5207(1)	1532(1)	9275(2)	30(1)
F(5)	5990(1)	2481(1)	8694(1)	30(1)
F(6)	5356(1)	2828(1)	10046(1)	26(1)
C(25)	2987(1)	4378(2)	4526(2)	11(1)
C(26)	2628(1)	4009(2)	3506(2)	15(1)
C(27)	2939(2)	4144(2)	2510(2)	17(1)
C(28)	3608(2)	4653(2)	2536(2)	16(1)
C(29)	3952(2)	5054(2)	3535(2)	16(1)
C(30)	3639(1)	4923(2)	4523(2)	14(1)
C(31)	3960(2)	4780(2)	1472(2)	24(1)
F(7A)	3724(6)	4244(9)	659(7)	57(3)
F(8A)	4723(6)	4740(13)	1685(10)	79(4)
F(9A)	3822(10)	5596(4)	1062(9)	71(4)
F(7B)	4017(14)	3997(9)	953(16)	88(6)
F(8B)	4645(9)	5115(11)	1589(10)	57(4)
F(9B)	3534(7)	5287(17)	711(11)	85(6)

Table S7. Bond lengths [Å] and angles [°] for 2b

Pt-C(1)	2.004(2)	C(14)-C(15)	1.391(3)
Pt-N	2.134(2)	C(14)-C(17)	1.501(4)
Pt-P	2.2108(6)	C(15)-C(16)	1.382(4)
Pt-Cl	2.3988(6)	C(17)-F(1)	1.322(3)
C(1)-C(6)	1.406(3)	C(17)-F(2)	1.331(3)
C(1)-C(2)	1.406(3)	C(17)-F(3)	1.340(3)
C(2)-C(3)	1.394(4)	C(18)-C(19)	1.394(3)
C(2)-C(7)	1.493(3)	C(18)-C(23)	1.394(3)
C(3)-C(4)	1.383(4)	C(19)-C(20)	1.390(3)
C(4)-C(5)	1.392(4)	C(20)-C(21)	1.381(3)
C(5)-O	1.374(3)	C(21)-C(22)	1.392(3)
C(5)-C(6)	1.392(3)	C(21)-C(24)	1.493(3)
C(7)-N	1.500(3)	C(22)-C(23)	1.383(3)
N-C(8)	1.485(3)	C(24)-F(5)	1.334(3)
N-C(9)	1.485(3)	C(24)-F(6)	1.340(3)
O-C(10)	1.423(3)	C(24)-F(4)	1.354(3)
P-C(18)	1.821(2)	C(25)-C(26)	1.395(3)
P-C(11)	1.830(2)	C(25)-C(30)	1.397(3)

P-C(25)	1.834(2)	C(26)-C(27)	1.390(3)
C(11)-C(12)	1.392(3)	C(27)-C(28)	1.387(4)
C(11)-C(16)	1.398(3)	C(28)-C(29)	1.386(4)
C(12)-C(13)	1.387(4)	C(28)-C(31)	1.500(4)
C(13)-C(14)	1.384(4)	C(29)-C(30)	1.383(3)
C(31)-F(9B)	1.321(9)	C(31)-F(7A)	1.278(9)
C(31)-F(9A)	1.323(9)	C(31)-F(8B)	1.280(12)
C(31)-F(7B)	1.335(12)	C(31)-F(8A)	1.316(12)
C(1)-Pt-N	81.95(9)	C(16)-C(15)-C(14)	119.6(2)
C(1)-Pt-P	101.28(7)	C(15)-C(16)-C(11)	120.6(2)
N-Pt-P	167.90(6)	F(1)-C(17)-F(2)	107.1(2)
C(1)-Pt-Cl	162.97(7)	F(1)-C(17)-F(3)	105.5(2)
N-Pt-Cl	91.54(6)	F(2)-C(17)-F(3)	106.2(2)
P-Pt-Cl	88.37(2)	F(1)-C(17)-C(14)	113.2(2)
C(6)-C(1)-C(2)	117.7(2)	F(2)-C(17)-C(14)	112.9(2)
C(6)-C(1)-Pt	126.66(18)	F(3)-C(17)-C(14)	111.4(2)
C(2)-C(1)-Pt	113.84(17)	C(19)-C(18)-C(23)	119.1(2)
C(3)-C(2)-C(1)	120.9(2)	C(19)-C(18)-P	123.93(18)
C(3)-C(2)-C(7)	123.0(2)	C(23)-C(18)-P	116.83(18)
C(1)-C(2)-C(7)	116.1(2)	C(20)-C(19)-C(18)	120.2(2)
C(4)-C(3)-C(2)	120.7(2)	C(21)-C(20)-C(19)	119.8(2)
C(4)-C(3)-H(3)	119.7	C(20)-C(21)-C(22)	120.6(2)
C(2)-C(3)-H(3)	119.7	C(20)-C(21)-C(24)	119.9(2)
C(3)-C(4)-C(5)	119.2(2)	C(22)-C(21)-C(24)	119.5(2)
C(3)-C(4)-H(4)	120.4	C(15)-C(14)-C(17)	118.8(2)
C(5)-C(4)-H(4)	120.4	C(23)-C(22)-C(21)	119.4(2)
O-C(5)-C(6)	124.2(2)	C(22)-C(23)-C(18)	120.7(2)
O-C(5)-C(4)	115.1(2)	F(5)-C(24)-F(6)	106.7(2)
C(6)-C(5)-C(4)	120.7(2)	F(5)-C(24)-F(4)	106.3(2)
C(5)-C(6)-C(1)	120.8(2)	F(6)-C(24)-F(4)	105.4(2)
C(5)-C(6)-H(6)	119.6	F(5)-C(24)-C(21)	113.7(2)
C(1)-C(6)-H(6)	119.6	F(6)-C(24)-C(21)	111.7(2)
C(2)-C(7)-N	108.92(19)	F(4)-C(24)-C(21)	112.5(2)
C(2)-C(7)-H(7A)	109.9	C(26)-C(25)-C(30)	119.1(2)
N-C(7)-H(7A)	109.9	C(26)-C(25)-P	121.51(18)
C(2)-C(7)-H(7B)	109.9	C(30)-C(25)-P	119.31(18)
N-C(7)-H(7B)	109.9	C(27)-C(26)-C(25)	120.3(2)
H(7A)-C(7)-H(7B)	108.3	C(28)-C(27)-C(26)	119.6(2)
C(8)-N-C(9)	108.7(2)	C(29)-C(28)-C(27)	120.7(2)
C(8)-N-C(7)	110.5(2)	C(29)-C(28)-C(31)	119.4(2)
C(9)-N-C(7)	108.77(19)	C(27)-C(28)-C(31)	119.9(2)
C(8)-N-Pt	110.98(15)	C(30)-C(29)-C(28)	119.6(2)
C(9)-N-Pt	111.82(15)	C(29)-C(30)-C(25)	120.5(2)

C(7)-N-Pt	106.03(14)		F(7A)-C(31)-F(8B)	121.1(7)
C(5)-O-C(10)	118.0(2)		F(7A)-C(31)-F(8A)	108.6(7)
C(18)-P-C(11)	102.53(11)		F(7A)-C(31)-F(9B)	75.9(8)
C(18)-P-C(25)	105.46(11)		F(8B)-C(31)-F(9B)	105.5(8)
C(11)-P-C(25)	101.38(11)		F(8A)-C(31)-F(9B)	127.3(6)
C(18)-P-Pt	115.46(8)		F(7A)-C(31)-F(9A)	106.2(5)
C(11)-P-Pt	118.23(8)		F(8B)-C(31)-F(9A)	78.1(7)
C(25)-P-Pt	112.05(8)		F(8A)-C(31)-F(9A)	103.7(6)
C(12)-C(11)-C(16)	119.0(2)		F(8B)-C(31)-F(7B)	105.1(9)
C(12)-C(11)-P	124.18(19)		F(8A)-C(31)-F(7B)	84.6(9)
C(16)-C(11)-P	116.77(18)		F(9B)-C(31)-F(7B)	105.0(7)
C(13)-C(12)-C(11)	120.6(2)		F(9A)-C(31)-F(7B)	131.3(7)
C(13)-C(12)-H(12)	119.7		F(7A)-C(31)-C(28)	115.8(5)
C(11)-C(12)-H(12)	119.7		F(8B)-C(31)-C(28)	116.6(6)
C(14)-C(13)-C(12)	119.7(2)		F(8A)-C(31)-C(28)	111.0(6)
C(14)-C(13)-H(13)	120.1		F(9B)-C(31)-C(28)	113.3(5)
C(12)-C(13)-H(13)	120.1		F(9A)-C(31)-C(28)	110.8(4)
C(13)-C(14)-C(15)	120.5(2)		F(7B)-C(31)-C(28)	110.3(6)
C(13)-C(14)-C(17)	120.7(2)			

The packing in the structure of **2b** is organized by fluorous (fluorine-fluorine) interactions. Parallel to the *bc* plane the trifluoromethyl groups from different molecules are oriented towards each other to give a corrugated plane arrangement of these fluorous interactions (Figure S4).

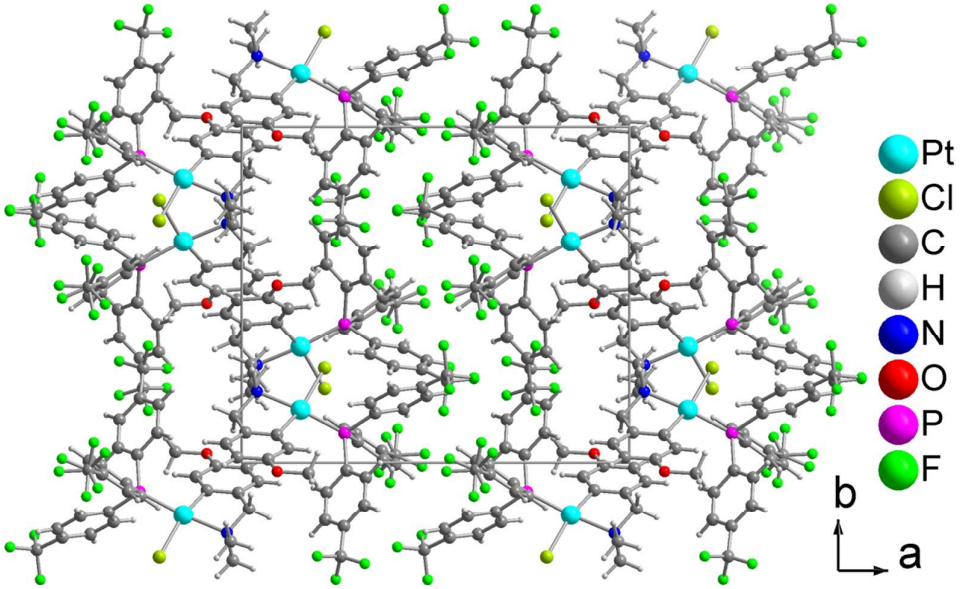


Figure S4. Section of the packing of the molecules in the structure of **2b** by showing the fluorous interactions parallel to the *bc* plane where the trifluoromethyl groups from adjacent molecules are facing each other.

Furthermore, packing in the structure of **2b** is also organized by intermolecular C-H···F,[1-3] C-H···Cl,[4,5] and C-F···π interactions (Table S6, Figure S5). There are no C-H···π[7-12] or π - π interactions.[13,14]

Table S8

Analysis of Potential Hydrogen Bonds and Schemes with d(D...A) < R(D)+R(A)+0.50, d(H...A) < R(H)+R(A)-0.12 Ang., D-H...A > 100.0 Deg

Note: - ARU codes in [] are with reference to the Coordinates printed above (Possibly transformed, when MOVE .NE. 1.555)

Nr	Typ	Res	Donor --- H....Acceptor	[ARU]	D - H	H...A	D...A	D -H...A
2	1	C(19)	--H(19) ..F(4)	[4554.01]	0.95	2.51	3.317(3)	143
4	1	C(20)	--H(20) ..F(6)	[4554.01]	0.95	2.52	3.105(3)	120
5	1	C(23)	--H(23) ..Cl	[4555.01]	0.95	2.74	3.482(2)	136

Translation of ARU-code to Equivalent Position Code

[4554.] = x,1/2-y,-1/2+z
[4555.] = x,1/2-y,1/2+z

Analysis of Y-X...Cg(Pi-Ring) Interactions (X..Cg < 4.0 Ang. - Gamma < 30.0 Deg)

- Cg(J) = Center of gravity of ring J (Plane number above)
- X..Cg = Distance of X (= F) to Cg (Angstrom)
- X-Perp = Perpendicular distance of F to ring plane J
- Gamma = Angle between Cg-H vector and ring J normal
- Y-X..Cg = C-F-Cg angle (degrees)
- Y..Cg = Distance of Y (= C) to Cg (Angstrom)
- X-H, Pi = Angle of the X-H bond with the Pi-plane (i.e.' Perpendicular = 90 degrees, Parallel = 0 degrees)

Y--X(I)	Res(I)	Cg(J)	[ARU(J)]	X..Cg	X-Perp	Gamma	Y-X..Cg	Y..Cg	Y-X,Pi
C(17) -F(1)	[1] ->	Cg(5)	[4565.01]	3.545(2)	3.429	14.72	112.12(15)	4.225(3)	26.78
C(24) -F(4)	[1] ->	Cg(5)	[4555.01]	3.676(2)	3.219	28.87	119.80(14)	4.505(3)	55.81
C(24) -F(5)	[1] ->	Cg(3)	[2646.01]	3.351(2)	3.091	22.74	136.48(16)	4.416(3)	60.65
C(31) -F(8A)	[1] ->	Cg(4)	[3666.01]	3.887(17)	3.671	19.19	121.1(10)	4.703(3)	13.66
C(31) -F(7B)	[1] ->	Cg(4)	[4554.01]	3.659(15)	3.491	17.43	122.2(10)	4.513(3)	41.24
C(31) -F(8B)	[1] ->	Cg(4)	[3666.01]	3.548(16)	3.229	24.47	150.3(9)	4.703(3)	36.00
Min or Max				3.351	3.491	14.72	150.30	4.225	60.65

[4565] = X,3/2-Y,1/2+Z
[4555] = X,1/2-Y,1/2+Z
[2646] = 1-X,-1/2+Y,3/2-Z
[3666] = 1-X,1-Y,1-Z
[4554] = X,1/2-Y,-1/2+Z

Cg(3) = C11-C12-C13-C14-C15-C16
Cg(4) = C18-C19-C20-C21-C22-C23
Cg(5) = C25 C26 C27-C28-C29-C30

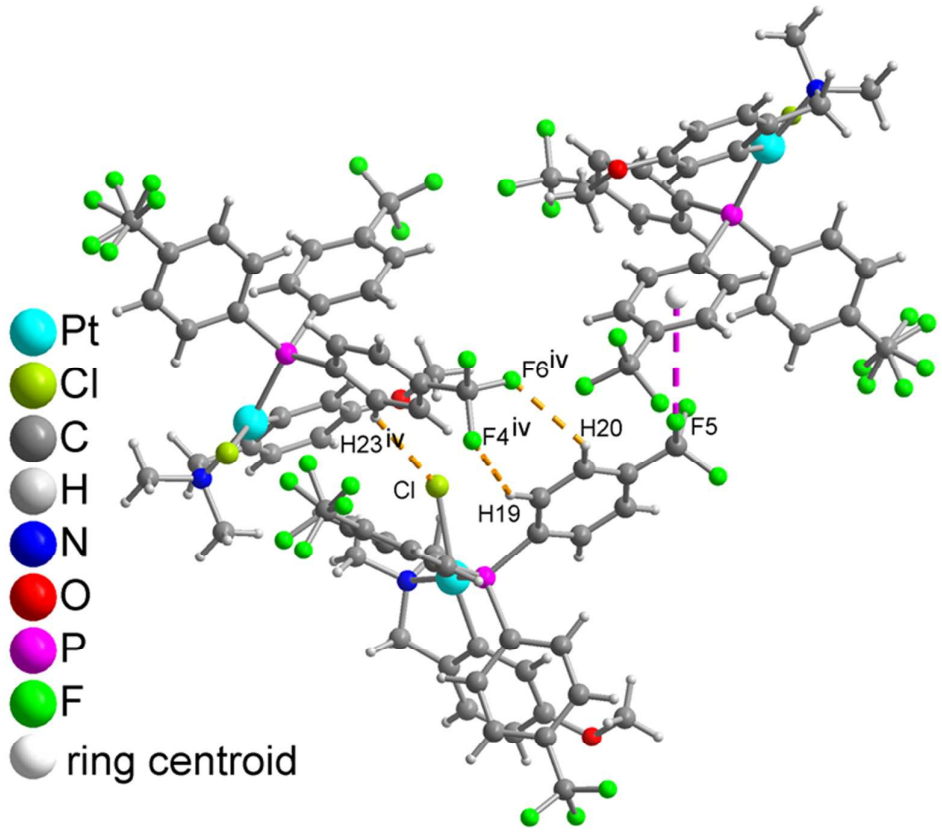
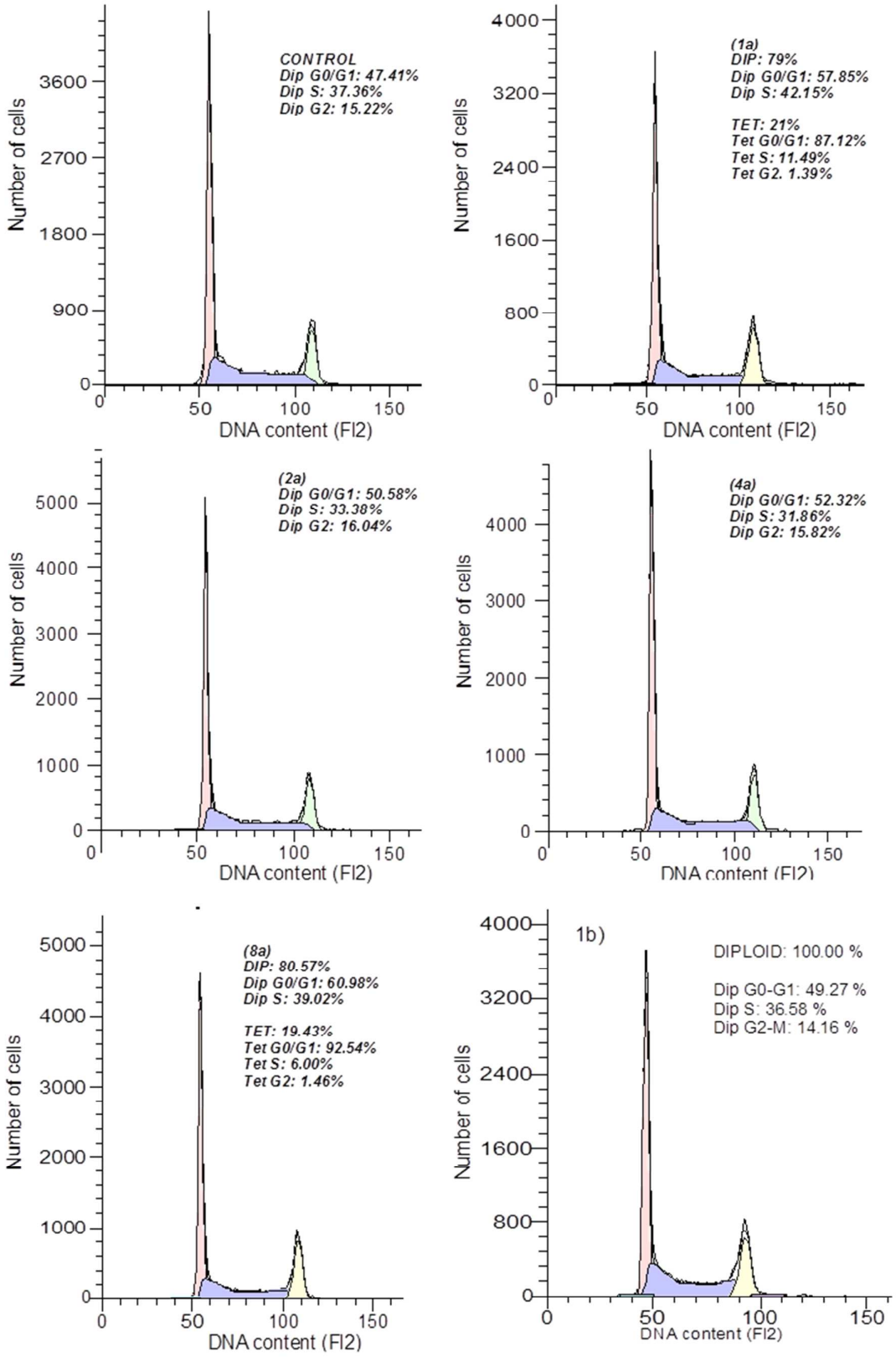


Figure S5. Section of the packing in **2b** showing selected intermolecular supramolecular C-H···F and C-H···Cl interactions indicated as dashed orange lines, C-F···π interactions as dashed pink lines. Symmetry transformations: iv = x,1/2-y,-1/2+z.


CONTROL
Dip G0/G1: 47.41%
Dip S: 37.36%
Dip G2: 15.22%
(1a)
DIP: 79%
Dip G0/G1: 57.85%
Dip S: 42.15%
TET: 21%
Tet G0/G1: 87.12%
Tet S: 11.49%
Tet G2. 1.39%
(2a)
Dip G0/G1: 50.58%
Dip S: 33.38%
Dip G2: 16.04%
(4a)
Dip G0/G1: 52.32%
Dip S: 31.86%
Dip G2: 15.82%
(8a)
DIP: 80.57%
Dip G0/G1: 60.98%
Dip S: 39.02%
TET: 19.43%
Tet G0/G1: 92.54%
Tet S: 6.00%
Tet G2: 1.46%
1b)
DIPLOID: 100.00 %
Dip G0-G1: 49.27 %
Dip S: 36.58 %
Dip G2-M: 14.16 %
Number of cells
DNA content (FI2)

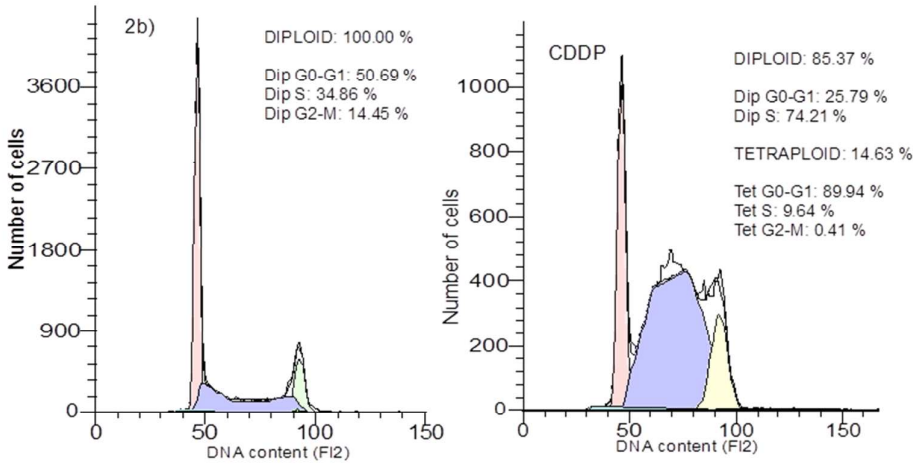
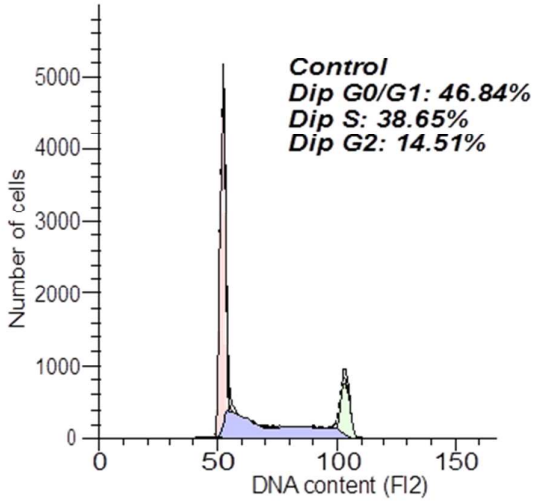
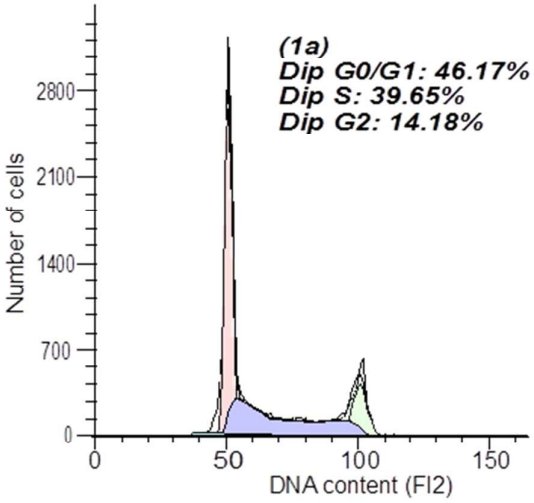
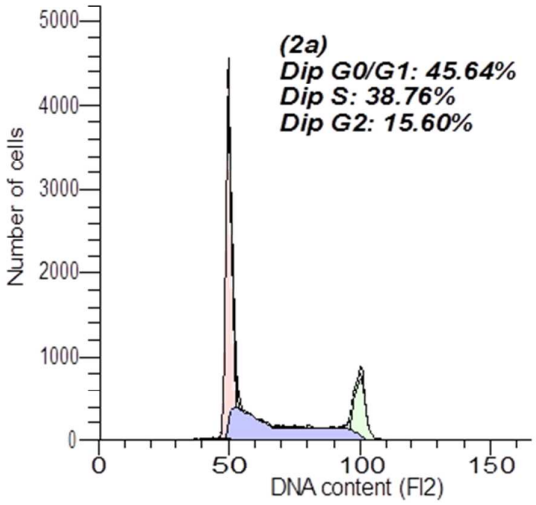
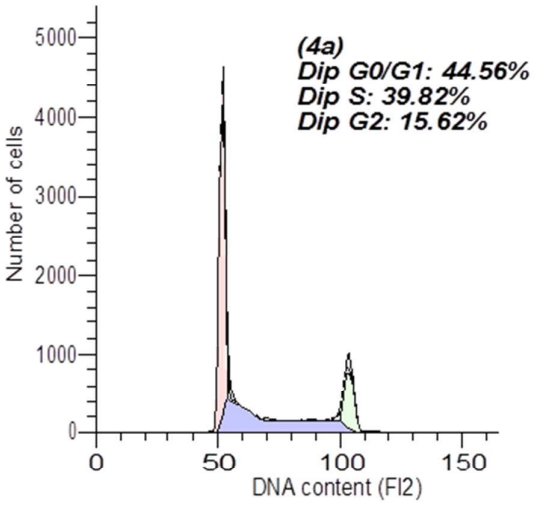


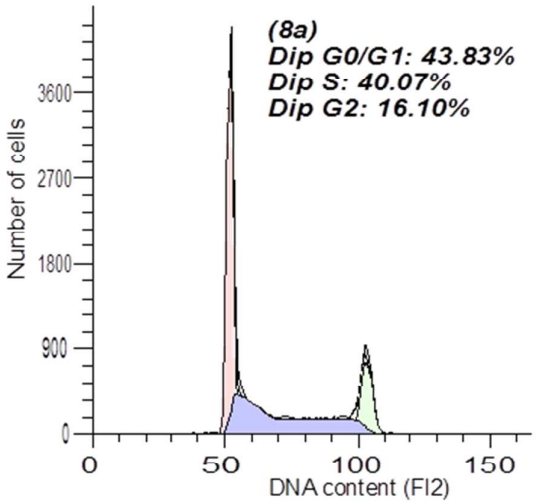
Figure S6. Cell cycle analysis of A2780 human ovarian cancer cells after 24 h at 310 K. FL2 histograms for A2780 cells untreated (negative control), cells exposed to compounds **1a, 2a, 4a, 8a, 1b** and **2b** and cells treated with CDDP (positive control). The concentration used was 1 μM (~IC_{50}) for **1a**, **2a**, **4a**, **8a** and CDDP and 4 μM (~IC_{50}) for **1b**, **2b.**

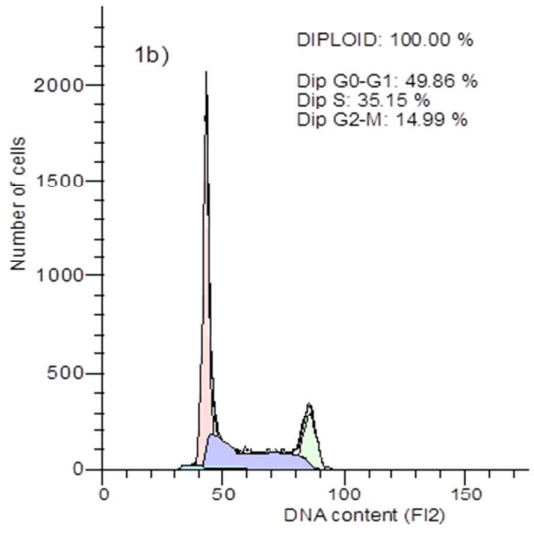

Control
Dip G0/G1: 46.84%
Dip S: 38.65%
Dip G2: 14.51%
Number of cells
DNA content (FI2)


(1a)
Dip G0/G1: 46.17%
Dip S: 39.65%
Dip G2: 14.18%
Number of cells
DNA content (FI2)


(2a)
Dip G0/G1: 45.64%
Dip S: 38.76%
Dip G2: 15.60%
Number of cells
DNA content (FI2)


(4a)
Dip G0/G1: 44.56%
Dip S: 39.82%
Dip G2: 15.62%
Number of cells
DNA content (FI2)


(8a)
Dip G0/G1: 43.83%
Dip S: 40.07%
Dip G2: 16.10%
Number of cells
DNA content (FI2)


1b)
DIPLOID: 100.00 %
Dip G0-G1: 49.86 %
Dip S: 35.15 %
Dip G2-M: 14.99 %
Number of cells
DNA content (FI2)

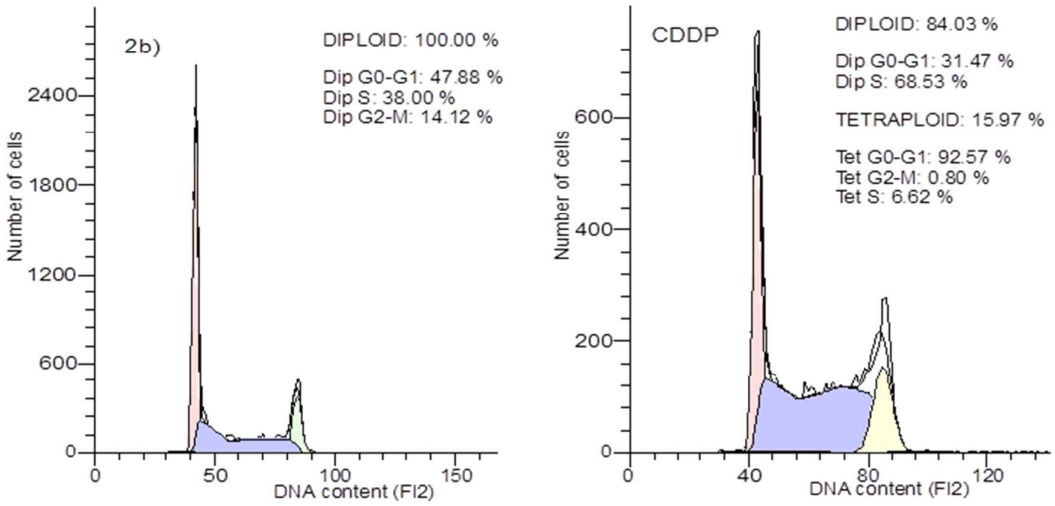


Figure S7. Cell cycle analysis of A2780cisR human ovarian cancer cells after 24 h at 310 K. FL2 histograms for A2780 cells untreated (negative control), cells exposed to compounds **1a, 2a, 4a, 8a, 1b** and **2b** and cells treated with CDDP (positive control). The concentration used was 1 μM (~IC_{50}) for **1a**, **2a**, **4a**, **8a**, 4 μM for **1b**, **2b** (~IC_{50}) and 10 μM for CDDP.

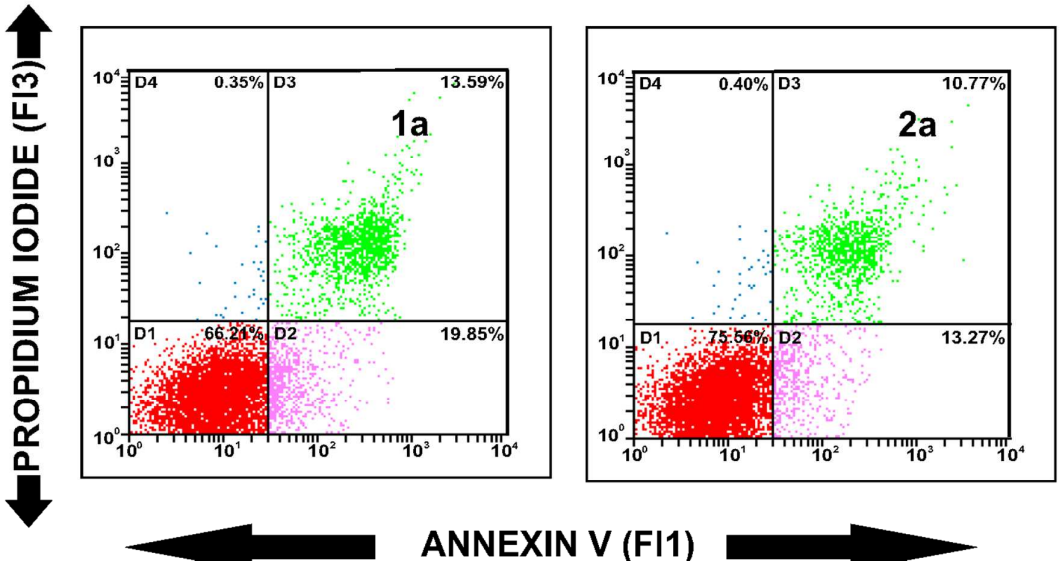


Figure S8. Apoptosis of A2780 cells after 24 h treatment with 2 μM (~ 2IC_{50}) of **1a** and **2a** as detected by annexin V/PI. Early apoptotic cells are in the low right quadrant (D2, annexin V-positive, PI-negative), whereas late apoptosis cells are in the up-right quadrant (D3, annexin V and PI-positive).

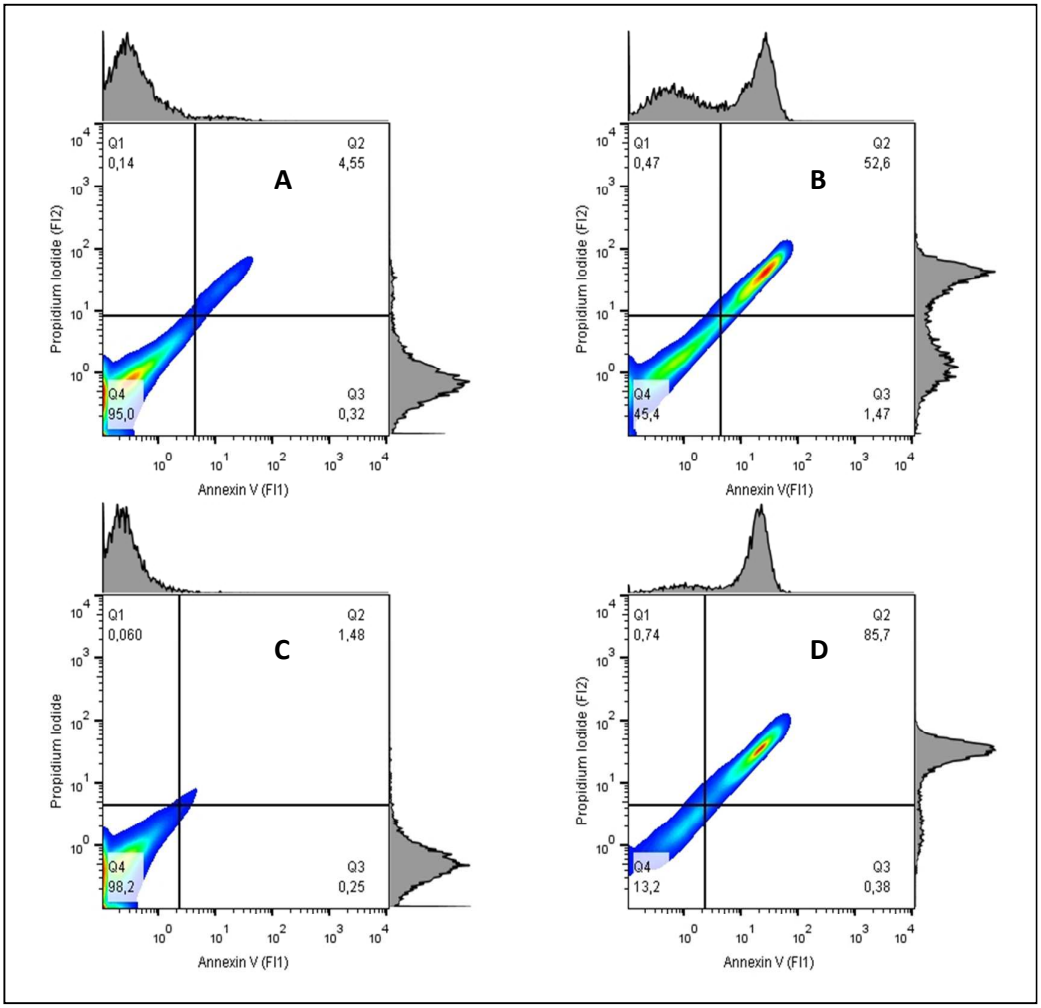


Figure S9. Apoptosis of A2780 cells after 24 h and 48 h treatment with 2 μM (~ $2IC_{50}$) of **4a** as detected by annexin V/PI. Figure S9-A (Control 24 h) and figure S9-B (**4a** 24 h) show apoptosis around 55% while figure S9-C (Control 48 h) and figure S9-D (**4a** 48 h) show apoptosis close to 90%. The graph was done with the FlowJoV10 software.

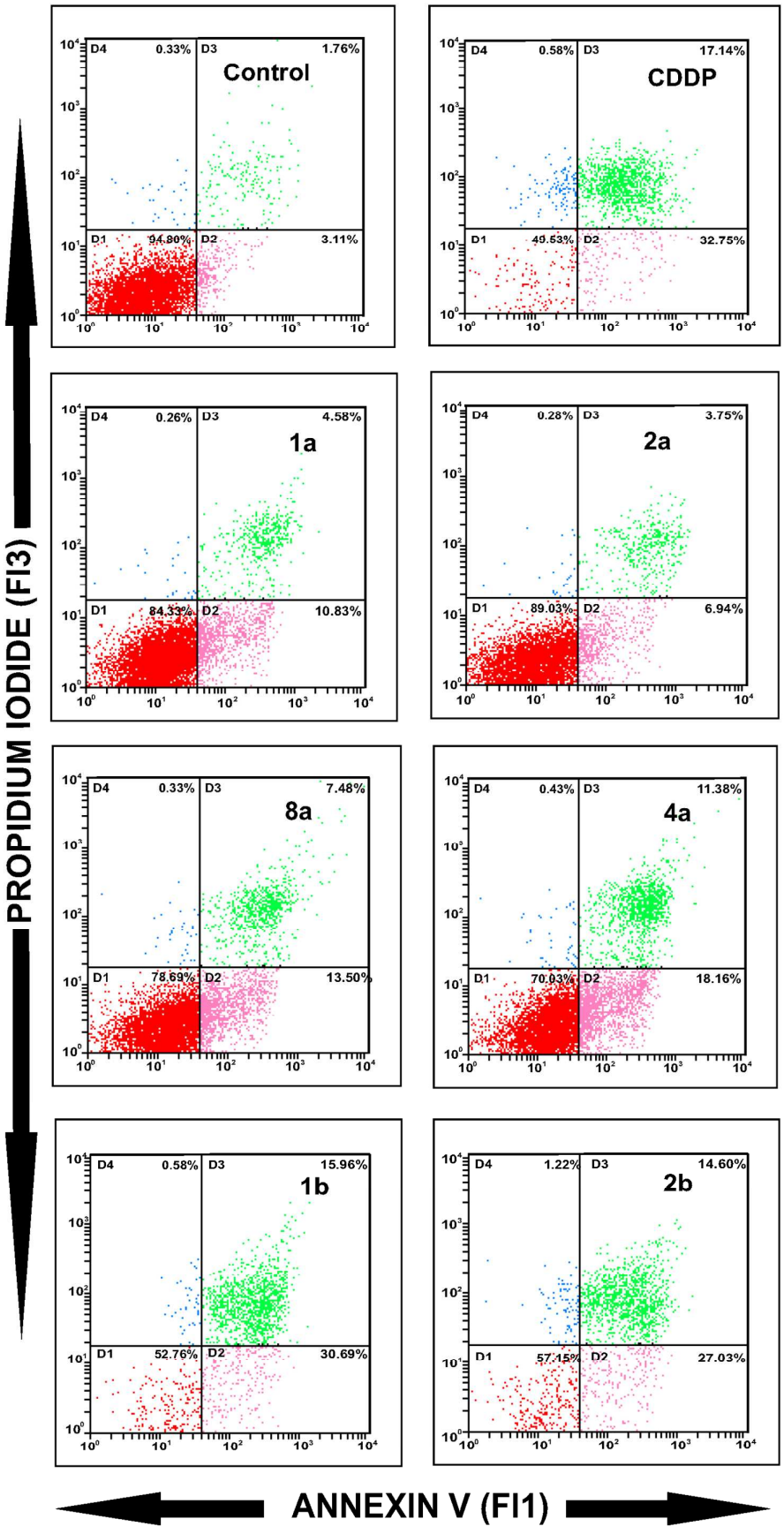

Control
D4 0.33%
D3 1.76%
D1 94.80%
D2 3.11%
CDDP
D4 0.58%
D3 17.14%
D1 49.53%
D2 32.75%
1a
D4 0.26%
D3 4.58%
D1 84.33%
D2 10.83%
2a
D4 0.28%
D3 3.75%
D1 89.03%
D2 6.94%
8a
D4 0.33%
D3 7.48%
D1 78.69%
D2 13.50%
4a
D4 0.43%
D3 11.38%
D1 70.03%
D2 18.16%
1b
D4 0.58%
D3 15.96%
D1 52.76%
D2 30.69%
2b
D4 1.22%
D3 14.60%
D1 57.15%
D2 27.03%
PROPIDIUM IODIDE (FI3)
ANNEXIN V (FI1)

Figure S10. Apoptosis of A2780cisR cells after treatment with CDDP or compounds (**1a**, **2a**, **4a**, **8a**, **1b** and **2b**) as detected by annexin V/PI. Cells were untreated (control) or treated with 2 μM (~2IC_{50}) of **1a**, **2a**, **4a**, **8a**, 8 μM (~2IC_{50}) of **1b, 2b** and 20 μM (~IC_{50}) CDDP for 24 h. Early apoptotic cells are in the low right quadrant (D2, annexin V-positive, PI-negative), whereas late apoptosis cells are in the up-right quadrant (D3, annexin V and PI-positive).

Reactions of the Platinum Complexes with 9-Ethylguanine followed by ^{1}H-NMR

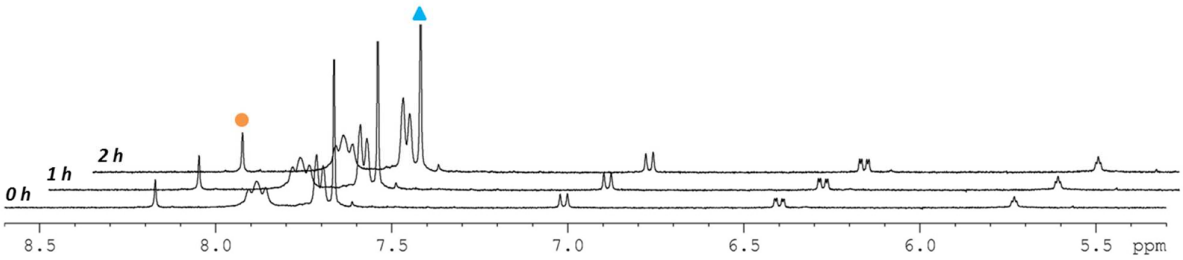


Figure S11. Aromatic region of ^{1}H NMR reaction of **8a** with the model nucleobase 9-EtG at 310 K for up to 2 h. Orange circle indicates 9-EtG coordinated to platinum, whereas blue triangle shows free 9-EtG.

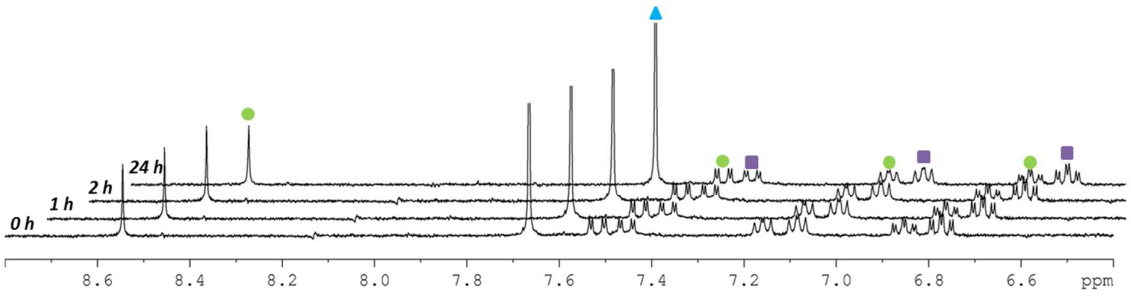


Figure S12. Aromatic region of ^{1}H NMR reaction of **2b** with the model nucleobase 9-EtG at 310 K for up to 24 h. Green circle indicates the signal corresponding to the new complex binded to 9-EtG, whereas purple square indicates the aromatic signal of the starting complex **2b**. Blue triangle shows free 9-EtG.

Hoecsht 33258 Displacement Experiments

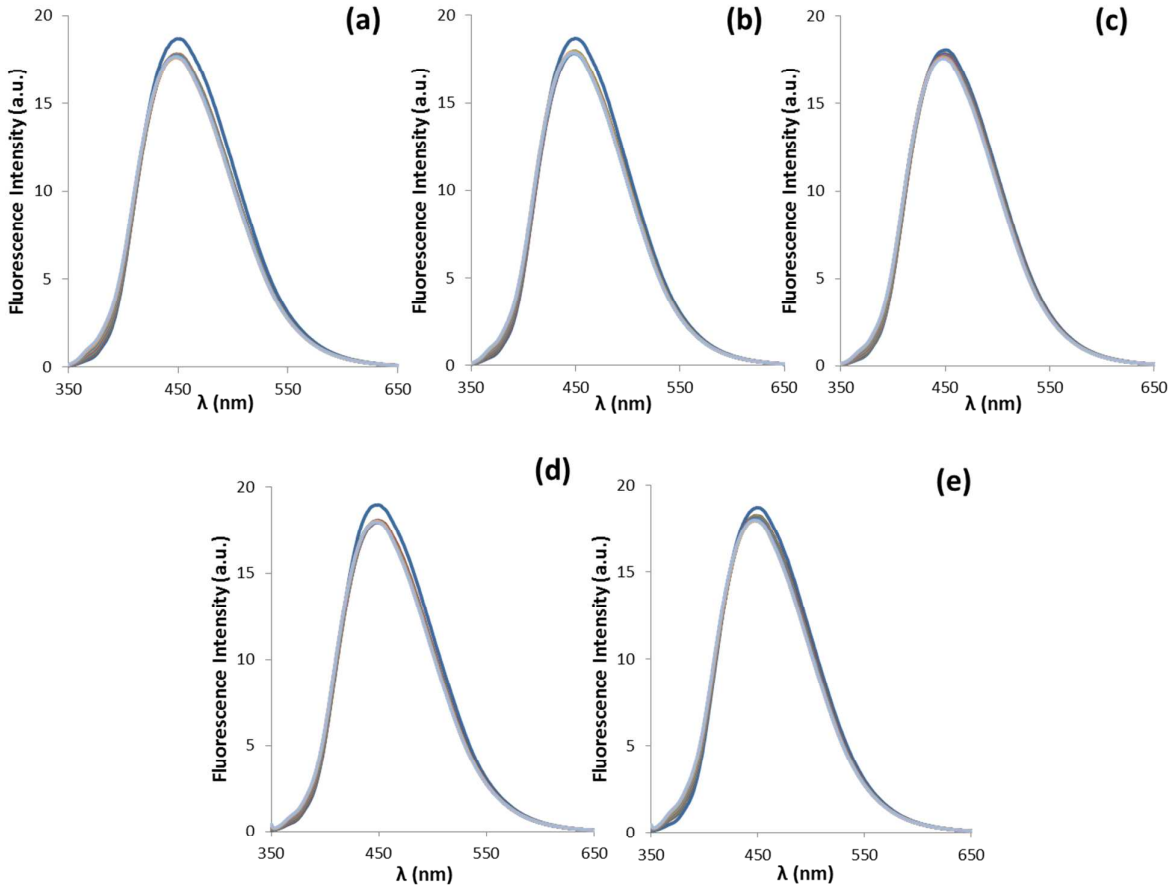


Figure S13. Fluorescence spectra at T = 298 K of the Hoechst-bound ct-DNA in aqueous buffer in the presence of increasing amounts of complexes **1a** (a), **2a** (b), **8b** (c), **1b** (d) and **2b** (e). λ_{ex} = 338 nm, [Hoechst]= 2 μM, [DNA] = 20μM, [complexes]= 0–30 μM in 2.5 μM increments.

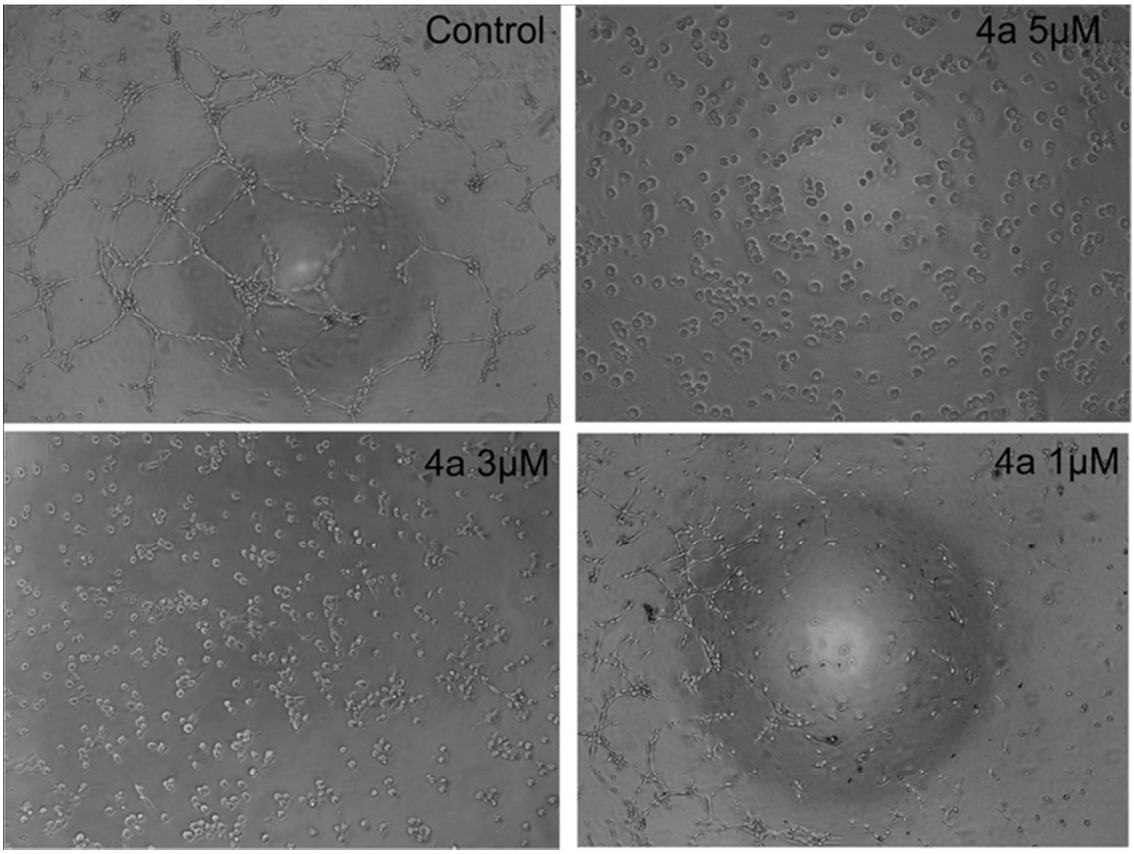


Figure S14. Complex **4a** inhibited tube formation of EA.hy926 cells. Typical images of EA.hy926 cells added to 24-well plates precoated with Matrigel for 12 h: for culture medium as a control and with **4a** at 5 μM, 3 μM and 1 μM. Tube formation of EA.hy926 cells were photographed under an inverted phase-contrast microscope.

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