Supporting Information

Figure S1. IR spectra of [**PtClL**] and [**PtCl₂L^H**] illustrating the slight changes due to the phenoxide and phenol moieties, respectively. The most significant changes are shown in blue ovals.



Figure S2. Absorption spectra of complex in aqueous sodium cacodylate buffer (pH = 7.2) upon addition of ct-DNA. Plot of [DNA]/($\varepsilon_a - \varepsilon_f$) vs. [DNA] for the titration of ct-DNA with [**PtCl₂L**^H] at 304–312 nm: experimental data points and linear fitting of the data using equation (1) (inset). [Complex] = 25 μ M; [ct-DNA] = 2.5 – 100 μ M (the concentration of ct-DNA in base pairs was determined from its absorption intensity at 260 nm with a molar extinction coefficient of 6600 M⁻¹ cm⁻¹).



Figure S3. Emission spectra of the DNA–EB complex (2.5 and 12.5 μ M in water), $\lambda_{exc} = 514$ nm, $\lambda_{em} = 610$ nm, upon addition of increasing amounts of [**PtCl₂L**^H] (0.2–2 μ M). The arrow shows the diminution of the emission intensity with the increase in [**PtCl₂L**^H]. Inset: Plot of $I_0/I vs$. [complex] for the titration of DNA–EB with [**PtCl₂L**^H]: experimental data points and linear fitting of the data.



Figure S4. Plot of the values of the observed rate constants obtained for the spontaneous reactions occurring on [**PtCl₂L^H**] as a function of pH (5% DMSO aqueous solution [complex] = 20×10^{-6} M, 25 °C, [HEPES/PIPPS] = 0.01 M).



Figure S5. Observed rate-constant values of the spontaneous reaction of $[PtCl_2L^H]$ as a function of the chloride (NaCl) concentration (5% DMSO aqueous solution [complex] = 20×10^{-6} M, 25 °C, [HEPES] = 0.01 M) at a) pH = 8.5 and b) pH = 4.0.







Table S1. IC_{25} , IC_{50} and IC_{75} values (μ M) of [**PtCl2**], [**PtCl2L**^H] and cisplatin for the cell lines SW620 (colorectal adenocarcinoma), A549 (lung adenocarcinoma) and A375 (melanoma). ±SD of three independent experiments.

Cell line	Compound	IC ₂₅	IC ₅₀	IC ₇₅
	[PtCIL]	11.0 ± 2.1	16.4 ± 0.9	21.3 ± 0.6
SW620ª	[PtCl ₂ L ^H]	16.1 ± 2.6	25.2 ± 3.8	39.5 ± 2.4
	cisplatin	63.5 ± 7.4	95.9 ± 4.8	> 100
A549 ^b	[PtCIL]	36.3 ± 0.9	64.7 ± 0.8	95.0 ± 4.8
	[PtCl₂L ^H]	64.7 ± 9.3	> 100	> 100
	cisplatin	61.5 ± 6.7	> 100	> 100
A375 ^b	[PtCIL]	14.7 ± 1.6	18.6 ± 1.1	22.4 ± 0.7
	[PtCl ₂ L ^H]	31.6 ± 2.2	38.9 ± 1.2	46.1 ± 0.4
	cisplatin	13.1 ± 1.9	42.4 ± 6.6	85.1 ± 16.3

^{*a*} after 24 h incubation; ^{*b*} after 48 h incubation.

Figure S7. Dose-response curves in SW620, A549 and A375 cell lines of [**PtCl2**], [**PtCl2LH**] and cisplatin. Cell-viability percentage is plotted against the logarithm of treatment concentrations (M). Data points are the mean ± S.D. of three independent experiments.

