# Solution studies of dinuclear polyamine-linked platinum-based antitumor complexes

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**Electronic Supplementary Information**

**Model S1.** Scientist equation used to fit the data for the aquation of **1** and **1´**.

// **1** *or* **1´** + $H_2O$

IndVars: T

DepVars: A, B, Cl

Params: KAB, KBA

A'=-KAB*A + KBA*B*Cl

B'=KAB*A - KBA*B*Cl

Cl'=KAB*A - KBA*B*Cl

// A=**1** *or* **1´**, B=**2** *or* **2´,** Cl=chloride concentration

// Initial conditions

T=0.00

A=$[$**1** *or* **1´**$]_{initial}$

B=0.000

Cl=0.000

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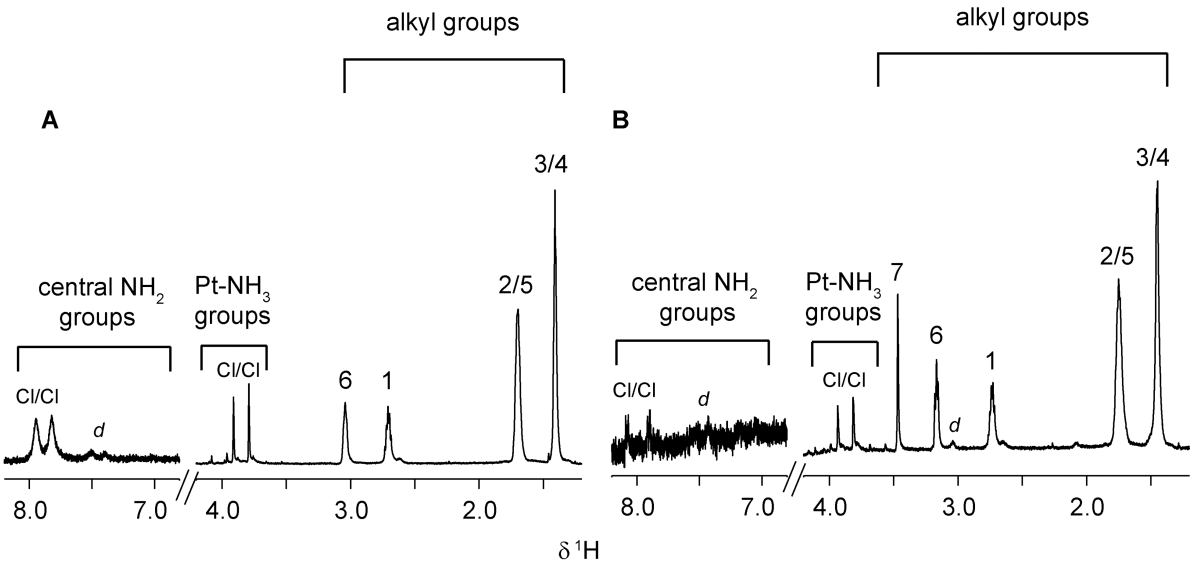


**Fig. S1.** $^{1}$H NMR spectra of **1 (A)** and **1´ (B)** at pH 5.4 and 298 K (for numbering scheme see Scheme 1) in 15 mM sodium perchlorate. The chemical shifts for the alkyl $CH_2$ groups have been tabulated in Table 3. For the doublet corresponding to the Pt-$^{15}NH_3$ groups of **1** and **1´** $^{1}J$ ($^{1}$H-$^{15}$N) = 72 Hz. The resonance labeled '*d*' corresponds to the terminal end of the dangling amine moiety of a Pt by-product (see main text). The equivalent peak for **1** is concealed beneath the resonance corresponding to the protons of $C_6$ group in the alkyl linker. The central $NH_2$ groups for **1´** are diminished in intensity due to exchange with the bulk water; the signal has been shown at a lower threshold for clarity. The Pt-$^{15}NH_2$ groups are concealed underneath the residual $^{1}H_2O$ resonance, which has been omitted for clarity.

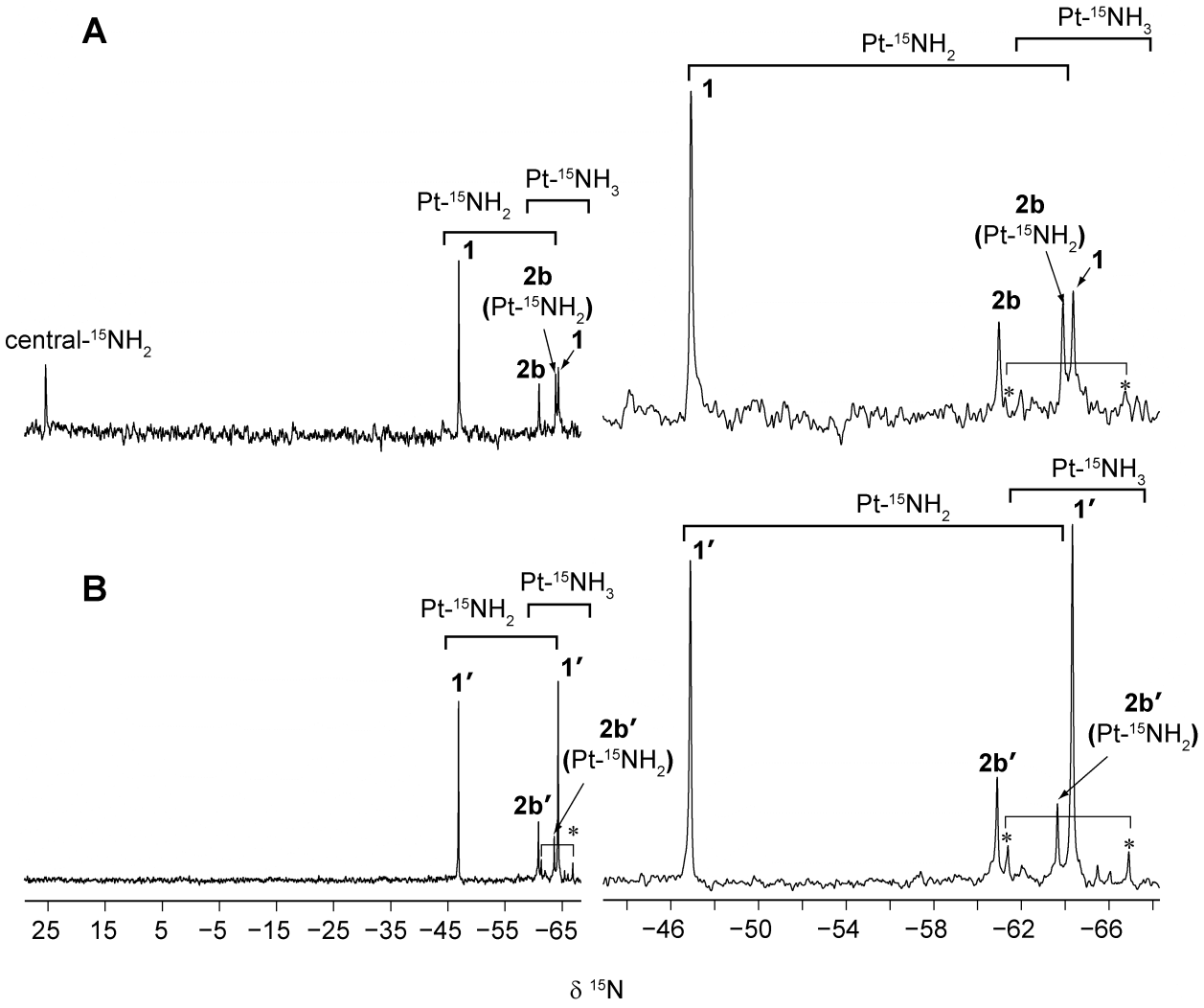


**Fig. S2**. $^{15}$N {$^{1}$H} DEPT NMR spectra of **1** (**A**) and **1′** (**B**) (15 mM sodium phosphate, pH 5.4, 298 K) shown on the same $\delta$ $^{15}$N scale – the spectra shown on the right are expansions of the region ~ $\delta$ –45 to –66 ppm. Key (see Scheme 2): **1/1′**, dichloro species; **2b/2b′**, {$PtN_3O$} end of the monoaqua monochloro species. The {$PtN_3Cl$} moiety of the monoaqua monochloro species, **2a/2a′**, is concealed beneath the corresponding dichloro species, **1/1′**; see text. Peaks labeled '*' are $^{195}$Pt satellites ($^{1}J$($^{195}$Pt–$^{15}$N) = 334 Hz) of the dichloro species, **1/1′**.