**Table S1. Crystal structure data for *cis*-[$PtCl_2(NH_3)$(2-pic)]**

| | *cis*-[$PtCl_2(NH_3)$(2-pic)] |
|---|---|
| Empirical form. | $C_6H_{10}Cl_2N_2Pt$ |
| fw | 376.15 |
| space group | $P2_1/c$ |
| *a*, Å | 9.878(1) |
| *b*, Å | 9.0223(9) |
| *c*, Å | 11.202(1) |
| $\beta$, deg | 102.595(2) |
| *V*, Å$^3$ | 974.3(1) |
| *Z* | 4 |
| $\mu$, mm$^{-1}$ | 14.85 |
| $\rho_{obsd,}$ gcm$^{-1}$ | 2.564 |
| *T*, K | 293 |
| λ, Å | 0.71073 |
| *R*, $(F_0)^a$ | 0.021 |
| $R_w$ [a] | 0.024 |
| | |

[a] $R(F_o) = \Sigma||F_o| - |F_c||/\Sigma|F_o|$. $R_w = (\Sigma w(|F_o| - |F_c|)^2/\Sigma w|F_o|^2$, $w = 1/\sigma^2(F_o)$.

**Table S2.** Bond lengths (Å) and angles (deg) for *cis*-[$PtCl_2(NH_3)$(2-pic)].

| | | | |
|---|---|---|---|
| Pt(1)-Cl(1) | 2.302(1) | Pt(1)-Cl(2) | 2.3188(9) |
| Pt(1)-N(1) | 2.027(3) | Pt(1)-N(2) | 2.033(4) |
| N(1)-C(1) | 1.344(5) | N(1)-C(5) | 1.356(6) |
| C(1)-C(2) | 1.391(5) | C(1)-C(6) | 1.495(6) |
| C(2)-C(3) | 1.369(7) | C(3)-C(4) | 1.376(8) |
| C(4)-C(5) | 1.381(7) | | |

| | | | |
|---|---|---|---|
| Cl(1)-Pt(1)-Cl(2) | 92.63(4) | Cl(1)-Pt(1)-N(1) | 177.67(9) |
| Cl(1)-Pt(1)-N(2) | 87.5(1) | Cl(2)-Pt(1)-N(1) | 89.33(9) |
| Cl(2)-Pt(1) N(2) | 176.0(1) | N(1)-Pt(1)-N(2) | 90.7(1) |
| Pt(1)-N(1)-C(1) | 123.2(3) | Pt(1)-N(1)-C(5) | 117.6(3) |
| C(1)-N(1)-C(5) | 119.2(4) | N(1)-C(1)-C(2) | 120.1(4) |
| N(1)-C(1)-C(6) | 118.5(4) | C(2)-C(1)-C(6) | 121.4(4) |
| C(1) -C(2) -C(3) | 120.6(4) | C(2)-C(3)-C(4) | 119.3(4) |
| C(3)-C(4)-C(5) | 118.4(5) | N(1)-C(5)-C(4) | 122.3(5) |

**Table S3.** Hydrogen bonding in ***cis,trans,cis*-[$PtCl_2(OH)_2(NH_3)$(2-pic)]**

| Bond | Distance (Å) X·····H | Distance (Å) X·····Y |
|---|---|---|
| Cl(2)···H(2a)-N(2) (+x, +y, +z) | 2.74 | 3.32(1) |
| Cl(2)···H(2d)-N(2) (+x, 0.5-y, 0.5+z) | 2.54 | 3.42(1) |
| Cl(1)···H(2a)-O(2) (-x, 0.5+y, 0.5-z) | 2.70 | 3.39(1) |
| O(1w)··H(2c)-N(2) (+x, 0.5-y, 0.5+z) | 1.93 | 2.81(1) |
| O(2)·····H(2b)-N(2) (1–x, -y, 2-z) | 2.46(6) | 3.12(1) |

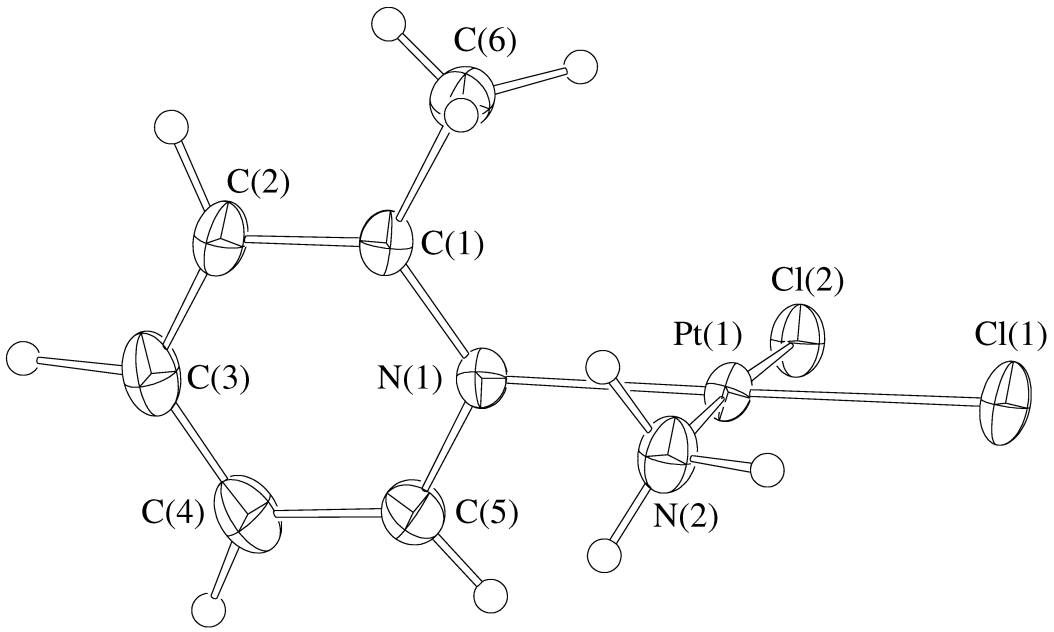


**Figure S1.** ORTEP representation of *cis*-[$PtCl_2(NH_3)$(2-pic)], ellipsoids at 30% probability.

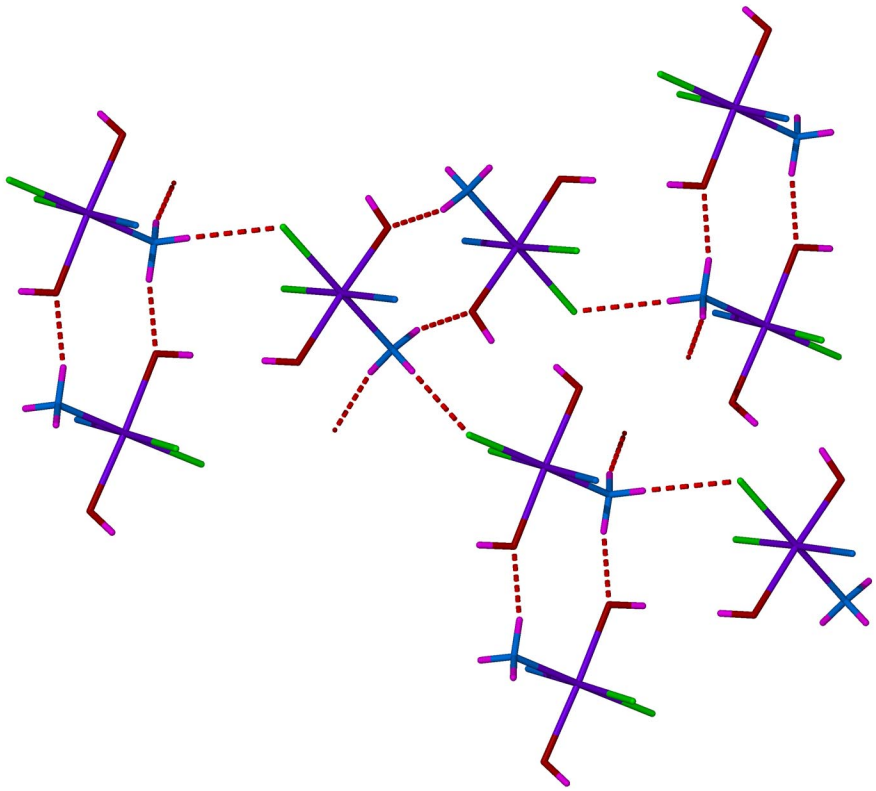

**Figure S2.** POVRAY representation of the hydrogen bonding in ***cis,trans,cis*-[$PtCl_2(OH)_2(NH_3)$(2-pic)].** The 2-picoline ring has been removed for clarity.