

SUPPLEMENTARY INFORMATION CC-COM-0202013-041045

Zinc Finger Peptide Cleavage By a Dinuclear Platinum Compound.

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**Experimental Details.** Platinum compounds and zinc finger starting materials were prepared as previously.<sup>1,2</sup>

For mass spectrometry experiments, initial 1mM reaction mixtures were made in water at 37°C and pH 7.0 adjusted using ammonium hydroxide, then H<sub>2</sub>O/MeOH (6/94) aliquots of approx. 10 µM used for spraying. Experimental procedure in general followed published protocol.<sup>3</sup> The reaction solution was not adjusted for pH during the reaction.

**NMR Spectroscopy.** NMR experiments also followed published procedure and were conducted at 1 mM concentration (1:1) in 5% D<sub>2</sub>O/95% H<sub>2</sub>O.<sup>2</sup>

For HSQC {<sup>1</sup>H,<sup>15</sup>N} NMR Spectroscopy the spectra were recorded at 37 °C on a Bruker AVANCE III 600 MHz spectrometer (<sup>1</sup>H, 600.1 MHz; <sup>15</sup>N, 60.8 MHz ) fitted with a pulsed field gradient module and 5mm inverse quadruple resonance (QXI) probe. The <sup>1</sup>H NMR chemical shifts were internally referenced to TSP, the <sup>15</sup>N chemical shifts externally referenced to <sup>15</sup>NH<sub>4</sub>NO<sub>3</sub>. The two-dimensional [<sup>1</sup>H,<sup>15</sup>N] HSQC spectra were recorded in phase sensitive mode using Echo/Antiecho-TPPI gradient selection. A total of 1024 points were acquired in the <sup>1</sup>H dimension and 96 complex points in the <sup>15</sup>N dimension with 128 transients. 1 mM platinum complex was allowed to react with 1 equiv of ZF in 5% D<sub>2</sub>O / 95% H<sub>2</sub>O, and the reaction was followed by HSQC spectroscopy. 20 two-dimensional spectra were obtained at hourly intervals which can determine the half-life of the reaction by the integration of <sup>15</sup>NH<sub>3</sub> peaks.

1. M.E. Oehlsen, Y. Qu and N. Farrell, *Inorg. Chem.* 2003, **42**, 5498; M.E. Oehlsen, A. Hegmans, Y. Qu and N. Farrell, *J. Biol. Inorg. Chem.* 2005, **10**, 433 and references therein.
2. A.I. Anzellotti, Q. Liu, M.J. Bloemink, J.N. Scarsdale and N. Farrell, *Chemistry and Biology*, 2006, **13**, 539.
3. Q.A. dePaula, J.B. Mangrum and N.P. Farrell, *J. Inorg. Biochem.* 2009, **103**, 1347.

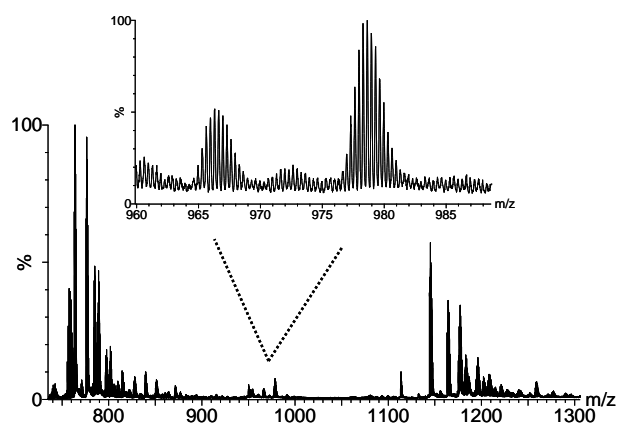


Figure S1. ESI-MS of the 1:1 complex of I (1,1/t,t) with intact zinc finger. The noncovalent association of ZF and Pt compound is shown in the inset at 978 m/z.

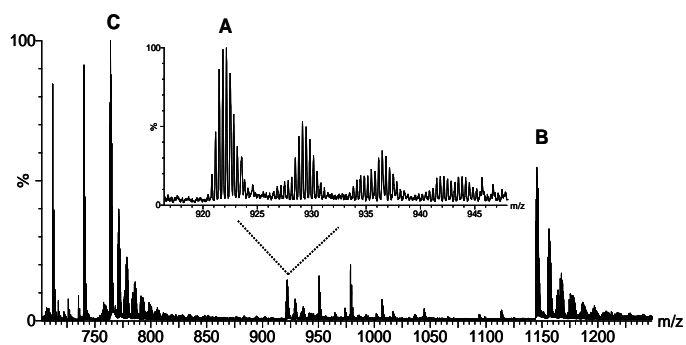


Figure S2. Incubation of 1,1/c,c, II, with ZF after 4 hours. Peak denoted (A) represents loss of Zn and subsequent loss of  $\text{NH}_3$  and Cl on the platinum compound. B is free, intact ZF.