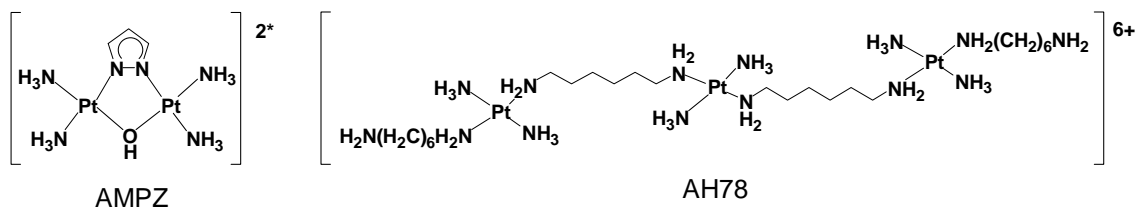


High resolution crystal structures of [d(CGCGAATTCGCG)]₂ co-crystallized with polynuclear platinum(II) complexes: Non-covalent interactions between DNA and potential anticancer drugs.

Seiji Komeda^{1,2}, Tinoush Moulaei², Takaji Sato¹, Masahiko Chikuma¹, Nicholas P. Farrell³,
Loren D. Williams²

¹Osaka University of Pharmaceutical Sciences, Takatsuki, Japan, ²School of Chemistry and Biochemistry, Georgia Institute of Technology, Atlanta, USA, and ³Department of Chemistry, Virginia Commonwealth University, Richmond, USA

Polynuclear Pt(II) complexes as potential anticancer drugs, [*cis*-Pt(NH₃)₂]₂(μ-pyrazolato)(μ-hydroxo)]²⁺ (AMPZ) and [{*trans*-Pt(NH₃)₂(hexanediamine)₂]₂(μ-*trans*-Pt(NH₃)₂(hexanediamine)₂)]⁶⁺ (AH78), experience intense non-covalent association with DNA, probably due to their high positive charges. In order to elucidate the significance of such non-covalent interactions in their cytotoxic mechanism, the two complexes were co-crystallized with the double-stranded DNA, [d(CGCGAATTCGCG)]₂, and their crystal structures were solved and anisotropically refined. In the high resolution DNA structures with AMPZ (1.25 Å) and AH78 (1.11 Å), the former non-covalently binds to the minor-groove, and the latter is arranged like a chain along the helix backbone. The structures and their significance will be presented.



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