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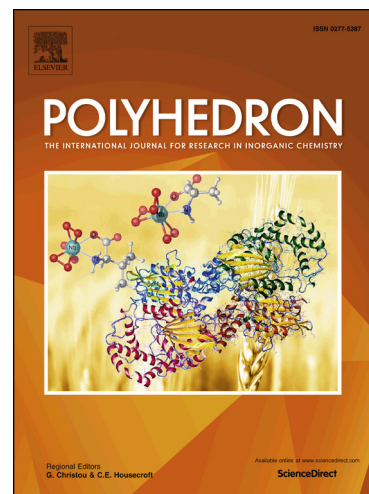
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**Platinum(II)-azoimidazole drugs against TB and cancer: structural studies,  
cytotoxicity and anti-mycobacterial activity**

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**Abstract:** 1-Alkyl-2-(arylamino)imidazoles (Haai-C<sub>4</sub>H<sub>9</sub> (**1**), Haai-C<sub>10</sub>H<sub>21</sub> (**2**)) and their Pt(II) complexes, [Pt(Haai-C<sub>4</sub>H<sub>9</sub>)Cl<sub>2</sub>] (**3**) and [Pt(Haai-C<sub>10</sub>H<sub>21</sub>)Cl<sub>2</sub>] (**4**) were synthesized and characterized by different spectroscopic studies and structural confirmation has been achieved in the case of complex **3** by single crystal X-ray diffraction analysis. Complexes **3** and **4** were evaluated for their *in vitro* anti-mycobacterial activity against *Mycobacterium tuberculosis* H<sub>37</sub>Ra (ATCC 25177) and H<sub>37</sub>Rv (ATCC 25618) strains, as well as against two clinical strains. Their cytotoxic effects on three cancer cell lines, A549 (human lung carcinoma), MCF-7 (human breast cancer) and Caco-2 (colorectal adenocarcinoma line), and one normal cell line, 3T3 (mouse normal fibroblast) were examined. The DNA interaction of the complexes shows that the intrinsic binding constant (K<sub>b</sub>) decreases with the increasing molecular dimension and the chain length of the 1-alkyl group. The longer 1-alkyl chain

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