

Synthesis and Cytotoxicity of Platinum(II) Complexes of 3-Aminocyclopentanespiro-5-hydantoin and 3-Aminocycloheptanespiro-5-hydantoin

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Z. Naturforsch. **58c**, 103–108 (2003); received August 2/September 24, 2002

Four new platinum(II) complexes of 3-aminocyclopentanespiro-5-hydantoin (acpsh) and 3-aminocycloheptanespiro-5-hydantoin (achpsh) were synthesized and characterized by elemental analysis, IR and ¹NMR spectra. The spectral analyses indicated a *cis*-square planar structure of the complexes with ligands coordinated *via* the NH₂ group. The complexes were evaluated for *in vitro* cytotoxicity in murine erythroleukemia (MEL) cells, clone F4N, using cell-growth and macromolecular synthesis assay. The compounds, with exception of [Pt(NH₃)(achpsh)Cl₂] (**IV**), exhibited much lower cytotoxicity than that of cisplatin (DDP). Compound **IV** was nearly as cytotoxic as DDP. The new complexes exerted low antibacterial activity as assessed by seven bacterial strains.

Key words: Platinum(II) Complexes, Cytotoxic Effects, Antibacterial Effect