

Studies on new polynuclear palladium compounds containing planar amines

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Currently attention is given to rule-breaker platinum compounds with the aim of altering the spectrum of activity. One such class of compounds is the polynuclear platinum compounds such as the highly active BBR3464 that has three *trans*-platinum ions linked together by 1,6-diaminohexane chains. Huq et al prepared a number of Pt-Pd-Pt complexes based on BBR3464 that have also shown significant activity against both cisplatin-responsive and cisplatin-resistant cancer cell lines.

Pd-Pd-Pd complexes based on BBR3464 were also reported to have some antitumour activity admittedly much less than that of corresponding Pt-Pt-Pt and Pt-Pd-Pt complexes. This is believed to be due to a greater lability of palladium complexes as compared to platinum complexes. It is suggested that the lability of trinuclear palladium complexes could be decreased by the incorporation of one or more sterically hindered ligands such as planar amines bonded to the metal ions. If so, such complexes may exhibit significant antitumour activity. Thus, we have synthesized trinuclear palladium compounds code named MH3, MH4, MH5, MH6, MH7 and MH8 (Figure 1). In MH3, MH4 and MH5 central Pd²⁺ ion is bonded to two planar amine ligands whereas in MH6, MH7 and MH8, two terminal Pd²⁺ ions are bonded to two planar amine ligands each.

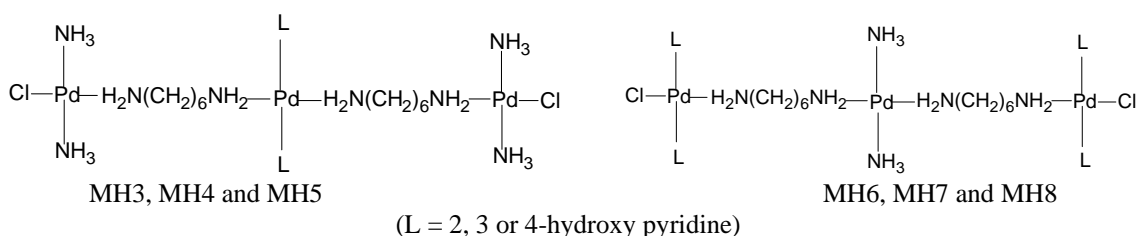


Figure 1: Structures of MH3, MH4, MH5, MH6, MH7 and MH8

This poster will describe the nature of interaction of the compounds with DNA.